Childhood Education

The Magazine for Teachers of Young Children

DOROTHY E. WILLY, Editor

FRANCES MCCLELLAND MAYFARTH, Associate Editor

Volume XIV Number 5

Next Month—

▪ How city-bred students learned to live and to work in a mountain community with mutual benefit and happiness both to themselves and their neighbors is described by Winifred E. Bain in her article, "Prospective Teachers Learn to Live With Their Neighbors."

▪ "The Community as a Laboratory For Living and Learning," both for teachers and pupils, is the title of an illustrated article by Lelia Ann Taggart, Director of Rural Education, Santa Barbara County, California.

▪ Jay D. Connor, Director of Elementary Education in the San Diego Schools, gives many helpful suggestions for making use of the community in a life-centered curriculum. Excellent photographs illustrate his article.

▪ In addition, parts of a practical working syllabus which show what is needed in teacher education to prepare teachers for intelligent use of community agencies will be quoted. This syllabus was prepared by the A.C.E. Committee on Teacher Preparation.—The Editors.

Contents for January, 1938

	Page
EDITORIAL—TODAY'S TRENDS IN TEACHING TECHNIQUE *Willard C. Olson*	195
KINDERGARTEN "GIFTS" AND THE NEXT HUNDRED YEARS *Worth McClure*	197
JUDGING BY RESULTS *Idelle Boyce and Ethel Mabie Falk*	200
TEACHING RURAL CHILDREN ELEMENTARY SCIENCE *Bess L. Crofoot*	206
NUMBER IN A SECOND GRADE STUDY OF INDIANS *Edwina Deans*	210
INDEPENDENT WORK AND PLAY PERIODS *Rebecca J. Coffin*	218
WHICH WAY IS NORTH?—LEARNING TO FIND DIRECTIONS *Katheryne Thomas Whittemore*	223
CONVENTION NEWS	227
BOOK REVIEWS *Alice Temple and May Hill Arbuthnot*	228
AMONG THE MAGAZINES *Ella Victoria Dobbs*	231
RESEARCH ABSTRACTS *John A. Hockett*	233
NEWS HERE AND THERE *Mary E. Leeper*	235

Published Monthly, September to May, by the

ASSOCIATION FOR CHILDHOOD EDUCATION

With the Cooperation of the National Association for Nursery Education

1201 Sixteenth Street N.W., Washington, D.C.

Subscription price $2.50. A.C.E. membership and subscription $3.00. Foreign postage 50 cents. Single copies 30 cents. Entered as second class matter at the post office at Washington, D.C., under the act of March 3, 1879. Additional entry at Menasha, Wisconsin. Copyright, 1938, Association for Childhood Education.

REPRINTS Orders for reprints from this issue must be received by the George Banta Publishing Company, Menasha, Wisconsin, by the 10th of the month of issue. Carefully indicate quantity, shipping instructions, etc.

Lincoln School, New York City

An independent work period in third grade provided for a variety of experiences in dramatic play.

Editorial Comment

Today's Trends in Teaching Technique

CHILDREN learn what they experience. This ancient truth takes on new meaning when the school extends the principle to the attainment of goals concerned with successful social living and desirable personality development. The manner in which an educational program is conducted then becomes recognized as a basic technique of value for the future of the learner. As rapidly as maturity permits, children participate in the planning of their activities. Investigation, sharing of ideas, agreement, and execution in action are recognized as essential components of a realistic learning experience. Authoritarian and competitive techniques give way to social interaction and cooperative behavior.

Technical research both leads and follows in the reconstruction of teaching methods in progress in elementary schools. The emphasis in the new program is upon function, relationship, and meaning, which improve both the quality of the initial learning and the permanence of recall. The atomistic approach which involved the learning of isolated parts to be subsequently integrated into a whole, is superseded by attention to the total response. Organismic evidence stresses the individuation of knowledge and skill from the whole, and the subsequent reorganization of experience into larger units. Experience and research in beginning reading have long led educators to the organismic conception, and the new evidence from biology and psychology has reenforced the desirability of similar applications in other areas of experience. Children are free to engage in any complex activity as an initial learning experience without drill in advance on the elements of the process as analysed by the adult.

CHILD development research demonstrates the individual character of growth and the important role of maturation in learning. The meaningless character of much discussion of minimum essentials, norms, prescribed curricula, and formal marks becomes at once apparent in the light of the new knowledge.

The behavior of the teacher in the new program, governed by purposes and general direction rather than by specific prescriptions, leads to an emergent curriculum. The trends noted point the way to an evolution of schools of childhood capable of supplying an optimum environment for social and personal growth.—*Willard C. Olson,* Director of Research in Child Development and Professor of Education, University of Michigan.

Equal Pay for Equal Training

A NEAR tragedy of early elementary education is the loss of many excellent teachers to the upper grades, high schools, and special departments. To a limited extent it is a tragedy to the teachers themselves, for most of them by choice or adaptability are best suited to teach young children.

Why this trek to upper levels? "Because," as each of these teachers says, "I cannot afford not to do so. With my years of invested training I must get the best financial returns possible." There are, of course, many who resist this call but it is strong enough to have become a definite menace to the early elementary field.

And why should the salary difference exist? Early excellent foundations are necessary for later good work. A primary teacher must be a master guide for the entire curriculum. A high school teacher will admit she knows a great deal about one, possibly two, or even three subjects, but would be "floored" by having to teach more than that. Older children can shoulder more responsibility than younger ones, whose teacher, therefore, must bear a greater load herself.

WHY not have equal salaries for equal training? Many communities do, but too many do not. It is up to the elementary teachers themselves to bring to the attention of the public the importance of careful education for the young child, to emphasize the need for expert training of the teachers who work with young children, and to demonstrate by the effectiveness of their own work their right to equal pay.—*D.E.W.*

Reversal

"I AM A university graduate in secondary education. I returned to school to do graduate work in primary education. This verse is the embodiment of some of the thoughts that went through my mind during my first weeks of experience with nursery school children."—*Josephine Chero,* Student, Milwaukee State Teachers College.

Give me the wherewithall, and what is necessary to decipher little minds.
Puzzles they are. And yet, perhaps, they're too simple for us,
Since looking into simple things and understanding is a big task.
Misconstrue, I will, grown away, as I am, from the simplicity of a child.
His acts I interpret too full of meaning or give lack of it.
I know not how to proceed. Though this I know:
He must grow into a being rich with experience, broad with outlook,
Deep with understanding,—controlled, yet so unrestrained.
To me a pleasant work, yet limitless in dangers.
I long to try, and try to know them, the little children,
And yet I feel amused and I smile
To think that I would try to delve into their minds
For things that only they and God must know.

Kindergarten "Gifts" and the Next Hundred Years

WORTH MCCLURE

A review of past "gifts," a glimpse into the future; a commendation and a warning; a hope and a challenge to those interested in the kindergarten and its contributions to the education of tomorrow.

Mr. McClure is Superintendent of Schools, Seattle, Washington.

THE kindergarten has brought us "gifts" far beyond the material ones which were a part of its early equipment. After reading about the first hundred years, it seems to me, as far as the kindergarten is concerned, that during the next hundred years we need to appreciate more those gifts that are spiritual, rather than those that are material; that we must give rather serious thought to what the kindergarten in this country ought to do for us qualitatively rather than quantitatively.

CONTRIBUTIONS OF THE KINDERGARTEN

We can say without fear of contradiction that the kindergarten has contributed the idea of successful living as the aim of education. It has contributed the idea of education as growth. It has contributed a great name—kindergarten, a place where children grow. This name gave us a new concept of children as growing things, affected by their surroundings. Thus we glean a concept of the child educated by his experiences, both in and out of school; of education as continuous, never-ending.

Many of the things which are now more or less commonplace in our way of thinking can easily be traced to the kindergarten. By implication, at least, the idea of parent education came from it, and the idea of mental health. From it we received the concept of learning by living; of the dependence of growth and development upon doing. Education is not something a teacher does to the child. It is what the child does of and by and for himself. This self-activity, this work and play of little human beings, this growing constitutes the educative process. It is education.

The mind of a child has been compared to a waxen tablet upon which the teacher writes. The kindergarten has shown that the child is a living, growing organism, and not an inert, waxen tablet; that the teacher is not a master engraver, but a wise cultivator of growth.

Better than any other contribution of the kindergarten I like the idea of simplicity—simplicity in the child's environment, the capitalization of soil and sunshine; in short, everyday things that are right here before us all the time. This idea did not prevail at Froebel's time. He at first believed in systematic growth minutely planned. His garden was laid out in careful German fashion, defining the pattern growth must follow. The kindergarten was just a trifle formal at first, like many things, but the living idea itself has been growing all these years.

However, the kindergarten *was not the discoverer* of a single one of these ideas. Not a single one. The kindergarten contributed them, but it did not discover them. That sounds contradictory on the face of it. Yet we know that Edison did not discover the incandescent lamp, nor was John Dewey the first to think of all the things which he published in his books.

Edison has told us how long and tirelessly he worked toward the production of this light. By countless experiments he found that filaments made of some substances became

more incandescent than others when electricity passed through them. But he did not discover that electricity made things hot. He did not even discover electricity. He merely used it and his partially borrowed knowledge of how it behaved. We know, too, how he tried air, vacuums, and gases as means of making filaments still more brilliant. A great deal of research was done and discarded because it did not work at all. This sifting, winnowing, refining process finally led Edison to the point where it was possible to make use of the things he and other people had discovered in a new and useful way. That is the way all progress is made, and that is why we need continually to try new ideas for improving education.

Did you ever study John Dewey's writings and discover the sources of the truths which he interprets? It is a thrilling quest upon which a much-loved instructor used to send his students. It is no slur upon John Dewey to say that he has brought together many kernels of truth—some of them from Froebel, among others—that he has reorganized them and has given to us a philosophy of education which applies to our needs in some ways better than any other philosophy today.

It is greatly creditable to the kindergarten to say that it has been a laboratory in which ideas as to how children grow have been tested and refined until it has given education a spiritual dynamic that has extended upward into higher levels, downward into the nursery school, and outward into the home and the related fields of parent education and adult education. Witness our currently successful adult forums. What is their distinguishing characteristic? How are they different from the old adult education classes? Simply that the forum period is an expression of self-activity—a kindergarten principle applied to adult education.

Where did some of the kindergarten ideas come from? Take education for successful living, for example. Plato in his *Republic* thought of the idea of a state where the good, the beautiful and the true would dominate. He thought of how people should be educated to appreciate these qualities. John Locke had a similar approach in his "Education of a Gentleman." Rousseau appears to have copied some of Locke almost word for word. Pestalozzi liked the thought of education for successful living. He lived with beggars "that beggars might learn to live like men." He believed in education by building a manner of living.

There is also the concept of the child in his environment. We have Comenius and Pestalozzi to thank for that. Pestalozzi is responsible for the thought that school was a place where love itself might be experienced. When we read how many things children were punished for in those days we understand how revolutionary this idea was. But the kindergarten was not the first to work it out; it had been developed before. Froebel had studied with Pestalozzi. His love of children had made a tremendous impression upon Froebel. It became part of him and his child garden.

The kindergarten with its ideals has affected the whole span of education; but it did not discover that education is continuous. Plato had made Socrates say that many, many years previously. The kindergarten demonstrated the effectiveness of that principle as it had never been demonstrated before.

What Of The Future?

If education is continuous we must not let the kindergarten become a separate institution in the school. Now we speak of kindergarten-primary, and, happily, more and more of kindergarten-elementary. Soon, perhaps, we shall not emphasize separate names at all. Soon, perhaps, we shall all see that principles are no respecters of grade limitations.

As we go on, we can see where the kindergarten has applied valid ideas in new ways after separating the wheat from the chaff, picking out the kernels, selecting those which

are vital, and molding them into a philosophy of education. We should see the kindergarten as a laboratory for the discovery of truth; as a spiritual dynamic—an ageless something which keeps on adapting itself, keeps on reaching out for new things that are good and true—which clings to principles that have been demonstrated; which does not hesitate to give up or modify types of methods, but which has always kept its vision focused upon the growth of the child. The kindergarten has never lost the idea of living education because it is itself a living idea. May it cherish this idea in this second one hundred years.

I plead that we shall not crystallize the art of the kindergarten; that we shall not lose its spiritual gift; that during the next one hundred years we shall not hestitate to continue to experiment, watching how children grow, studying the child in his environment, bringing parents and community more than ever into the picture, trying to meet the tremendous challenge of education as the cultivation of growth.

The kindergarten has wrought but it has not discovered. This fact should help to keep us humble. It will be a sorry day for America if American Education ever gets to the point where it becomes complacent and self-satisfied; where it says, "Now I am good enough." We need constant challenge, criticism and suggestions. We must keep on thinking and changing. We dare not crystallize this thing we call public education, else we shall institutionalize ourselves into a living death.

This living death is no idle terror. Pearl Buck has told us that it has often been true with religions. When the first few followers get the faith it is a tremendously vital thing to them. In order to protect it they build around it certain institutions and rituals. These things in turn become the ends, while the old limitations and disciplines, the spirit of the religion finally shuffles off mortality like the human soul. The spirit passes out of the body which like the ancient Egyptians the mourners continue to revere.

Thus Kipling, when he went home from that Diamond Jubilee of Queen Victoria with its color, its ceremonials, its glamor of triumph, sat down in his study with a sense of foreboding in his heart. He pondered upon the dread significance of the cheering throngs, the spectacular pageantry, the pomp and circumstance. He shuddered at an England become proud and boastful. Then he wrote that immortal "Recessional", and dared finally to publish it, thanks to his wife. You recall his confession:

If drunk with sight of power, we loose
  Wild tongues that have not Thee in awe,
Such boastings as the Gentiles use,
  Or lesser breeds without the Law—

Do you recall its ringing challenge:

The tumult and the shouting dies;
  The Captains and the Kings depart;
Still stands Thine ancient sacrifice,
  An humble and a contrite heart.
Lord God of Hosts, be with us yet,
  Lest we forget—lest we forget!

May we view in humbleness of spirit the next hundred years of the kindergarten. May we have no false pride of discovery, nor boast of a perfection which cannot be touched with thought of change. May we not forget that we honor the founder best by dedicating ourselves to the living, growing spirit of the kindergarten—that we shall highly resolve to give ourselves to that experimenting, refining process by which he and those who have come after him have wrought an educational-spiritual dynamic. May we not forget that the next hundred years will be the testing years; that the material body which is the form, the ritual, and the pageantry, will struggle mightily to subdue the spirit. Lest it take wings and depart, let us *here* highly resolve that the *soul* of the kindergarten shall be lifted up to shed its beneficent light upon education everywhere.

Lord God of Hosts, be with us yet,
. . . lest we forget!

Judging By Results

IDELLE BOYCE and ETHEL MABIE FALK

A discussion of language activities and their effect upon personality growth with an illustration of a classroom experiment that brought about desirable results.[1]

Miss Boyce is a teacher in the Randall School and Mrs. Falk was formerly superviser of curriculum, Public Schools, Madison, Wisconsin.

HOW FREQUENT in discussions of personalities are such comments as: "I think he knows his field, but he's so arrogant in expressing his ideas," or "She's interesting, but she insists upon doing all the talking," or "I can't explain it to her because she just won't listen," or "We never talk about political questions because Dan always gets angry when anyone disagrees with him."

Language is good language only when its effect is greater understanding. Something happens between two or more people as a result of words spoken or written. Speech may have all the merits of good classroom reports as they are impressed upon children by printed charts, textbooks, and teacher talk. The grammatical structure of the sentences may be correct; the speaker may be free from the annoying habit of using "and" or "a-a" between sentences; he may even have a good "beginning sentence" and a good "ending sentence." Yet the result may be indifference or even antagonism.

The only true standards of good language for children to acquire are based on the question, "What happens when you talk?" More concretely this means:

Do others listen when you tell a personal experience?
Can people follow the directions that you give?
Can you take part in discussion without becoming angry or making others angry?
Are you tolerant and respectful of others' viewpoints?
Can you make explanations that your listeners will understand and accept?
Can you ask for information so that it is willingly given?
Are you accurate and thorough in reporting what you hear or read, so that you give true understanding to others?
Do you like to listen when others talk?

Children, and adults also, should realize that the emotional response to their words is as important as the intellectual response. The same words, spoken in different tones or with different intentions behind them or in different situations, produce different results. Language is a flexible and volatile power. The ability to use it requires deep understanding and sensitivity to personalities and situations, as well as knowledge of words and sentences.

TRENDS IN LANGUAGE TEACHING

In the newer language programs there is recognition of these elusive and difficult goals in the use of speech. Language teachers are thinking of themselves as architects who can plan and build toward a definite result, not as carpenters who can only repair or remodel what has been done. Five trends indicate the greater reality and naturalness of the language class: (1) recognition of the psychology of child growth and of differences among children, (2) substitution of such real activities as discussion, letters, telephoning, interviews, and reports for many of the older drill exercises, (3) more small group projects requiring cooperative effort and leadership, (4) more guidance before expression instead of correction after expression, (5) the development of audience conscious-

[1] For assistance in the classroom study reported in this article the authors express appreciation to Mrs. Alice Rood, Principal of Randall School.

ness by both speakers and listeners.

The first of these trends, recognition of maturity levels and the normal growth of children in their use of language, is evident in the new kindergarten programs. Realizing that the child of four or five is highly individualistic, the teacher does not force his use of language in the social group. There are stages of growth in language as there are stages of readiness for reading. The transition from home to kindergarten may produce a sudden change in the personality and language of the child. The dazed feeling of the little girl who said there were "too many children" is typical of the reaction of many shy children. Loud-voiced leadership is typical of the reaction of others who are overstimulated by being suddenly projected into a large group.

The teacher with understanding avoids shocks for these children and leads them into comfortable relationships with other children before having them stand up, meet the battery of faces, and talk. In progressive kindergartens today one seldom sees the old circle of thirty or forty children all staring at one frightened child who stands beside the teacher and tries to talk. Even the teacher's sweet voice and encouraging arm about him failed to draw out more than terrified monosyllables. Instead of that situation, you may see a little group of builders stop their work for a few minutes as they quietly plan with their teacher how they may complete their boat or train. Or you may see a group around the library table talking about picture books and sharing their pleasure and interests. The smaller groups give more chance for participation than the large group. The activity upon which they are engaged gives them something to talk about in a normal, unself-conscious way.

Fortunately, the formal program, in which kindergarten children entertain their parents, is being rapidly eliminated from modern schools. It creates many personality difficulties merely for the pleasure or flattery of parents. In some communities teachers are still battling for the mental hygiene of their pupils against the demands for such entertainment. One program of that kind may destroy social attitudes built up by months of careful effort on the part of teachers.

The second of the new trends brings reality to the language class. It was absurd to think that children who spent all of their time in taking dictation, writing practice sentences, or memorizing rules for capitals would, thereby, be trained to meet their daily needs in language outside of school. Even the old oral language class gave no real training for discussion because one child merely talked at, not with, his classmates. Many contacts which the teacher formerly thought she should make are now handled with courtesy and effectiveness by the class. A child, not the teacher, goes to tell the janitor that several children in the class have grown and need their seats adjusted for comfort. When the children want to have a Christmas party, a committee may interview the principal to secure permission. If the class wishes to visit the library a child telephones to arrange for an appointment. If favors are received, the class writes notes of appreciation.

The third trend, the substitution of small group and individual projects for entire class work, provides for wide differences in ability and develops independence. In one class, for example, a child was asked to make a daily report on the temperature so that it might be recorded on the class chart. On the day of a foreign broadcast the local weather report was not given over the radio, but the child secured the temperature by telephoning his father at the office to ask him to look at his thermometer. In another class a committee may be created to compose the body of a letter which the class wishes to have sent. Certain children may be *secretaries*. They may copy from the board the daily news that has been dictated by the class so that a record will be kept. They may keep diary records of cocoons or frog's eggs as they develop.

The fourth trend is the increased time and help given to children before they are asked to express themselves. If a child has an announcement to make in another room, he may rehearse it before his teacher or his classmates until he feels sure of himself. If the class is writing a letter, a rough draft of the body is planned and written before the final copy is begun. If committees are to report to the class on some topic they have studied, the teacher spends some time in helping them to find material and to plan its organization. Such training is of more value than criticism offered after the report has been made. It establishes confidence in the speakers, gives them a feeling of their obligation to give their listeners something worth hearing, and assures a performance of which they can be proud. Success is a real stimulus to further effort.

The fifth trend, the development of audience consciousness, is increasing the pleasure of the language class as well as improving the social attitudes of children. In the past, the audience attitude of the class was often that of an unfriendly jury passing judgment on the speaker's performance. Children now prepare reports on topics to which the others in the class have not given intensive study. The charm of newness makes for courteous listening. Educational broadcasts are received in classrooms and later discussed by the children. A speaker is sometimes directed to test his audience on their listening. He asks questions about his report instead of receiving criticisms on it.

The ability to listen is a slow growth. The six-year-old listens in discussion merely in order to find an opening for his own talk. If the teacher of grade one can impress upon the children only the habit of not interrupting others she has made progress in audience feeling. The next step is learning to take in what others say. Still higher levels are learning to react mentally to others' ideas, to stimulate others to express themselves, and finally by the interplay of thoughts in group discussion to develop a question or a topic toward a conclusion. Many adults are still on the lower levels in their ability to listen. Children in modern schools are having experiences that should carry them through to the higher levels.

Dangers in the New Language Programs

The introduction of the so-called functional activities into the language class will not, however, automatically assure the development of social attitudes. A primary requirement of a good language activity is that *it be true to its purpose and function on the child's level.*

At times some of the unique, so-called "new techniques" are more superficial and valueless than the old formal programs. As examples we may cite some of the *telephoning* now being taught. Children have many real school needs for telephoning: to arrange for an observation trip to a dairy, the library, or perhaps to a home; to invite guests to a program; to make a request for a speaker, and so on. Those are legitimate situations to use in the classroom. In preparation for actually doing the telephoning, valuable practice dramatizations may be the means of teaching courtesy and custom in the use of the telephone. Contrast the reality of such activities with the motive and sincerity of placing a telephone order for groceries, sending a telegram by telephone, or carrying on a telephone conversation with a friend before a class of thirty children! There can be no genuine social or personality growth in activities carried out with unnatural motives and in unsuitable situations.

Planning of club activities and arranging for parties have often contributed considerably to this superficiality and imitation of adult behavior. Children have been so concerned with the machinery of the club that frequently they have conducted formally correct, efficiently directed meetings in which nothing of real interest or value to the class

has been said or done. At their parties, first and second grade children have been asked to "converse with your little guests." Both host and guest become pitifully uncomfortable because their conversation outside of school usually includes an adult. For that reason teacher participation in group discussion is a natural and encouraging condition.

In carrying out activities related to the social studies we have been unconsciously developing many unfavorable personality characteristics. We have provoked discussions in which children, out of deep ignorance, expressed snap judgments and reached conclusions without having any real information on the problem. We have asked for three-minute reports on the "story of a woolen coat" without spending any time in seeing that the reporters secured even one specific fact to report. We have let children pretend to be guides in Switzerland without first making them responsible for securing information that is accurate and complete. Seldom have children been expected to give credit to their sources of information. They have been allowed to think that anything which they read or hear may be given out as their own. Such practices put a premium on using a persuasive manner to convince others of what the speaker really does not know exactly or fully. They make the entertaining of others more important to the child than intellectual honesty. These techniques train excellent victims and dispensers of propaganda.

The fad for creative writing has led to many absurdities. Children have been asked to make up poetry and plays about health and safety. Those topics are not naturally the stimuli to original expression. The result is usually neither good poetry nor good health or safety teaching. Again, the activity should be one which is true to the content and the child's purpose in studying it. Little talks on health and safety, effective posters, or informational paragraphs for a school paper seem more genuine and useful in developing language power.

Standards for Language Activities

Such activities are, and should be, the organizing core of our language programs. Conversing, reporting, interviewing, announcing a speaker, writing letters, telephoning, story-telling, and entertaining others are all natural, vital language situations. They must, however, be introduced and developed with these standards in mind:

Is the children's participation in this activity genuine and natural?
Is the content with which they are dealing within their ability to comprehend adequately?
Can this activity be carried on with sincerity in a classroom situation?
Do the children have sufficient preparation to express themselves with mental honesty?

If our guidance of language activities regards these standards, we may be able to see growth from year to year in the child's consideration for his listeners, his willingness to hear others and be convinced by them, his sense of responsibility for his statements, his desire for genuine criticism, his ability to cooperate with others, his poise and tact in meeting his social needs in the use of language, and his realization of the obligation to be intellectually honest when he expresses opinions.

Application of These Standards

Madison teachers have been working for several years toward the development of personality adjustment along with language ability. As an illustration of the procedure, the following description is given to show how one teacher made her goals and her techniques specific to the needs of individuals in the class and to the major personality needs of the group as a whole. Although the class which is described is a sixth grade, the plan and purpose are applicable to any grade.

Analysis of Class Needs: Just as the actor, stepping on a stage, discovers immediately the personality of an audience, so the teacher, entering a classroom, discovers the personality of the group. Made up of obvious general characteristics, it has apparently developed as different individuals have reacted one upon another over a period of years. Before group needs can be met, this general tone of the class must be fully understood. The outgrowth of individual attitudes in turn becomes the key that unlocks the door to individual problems and the force that continues to mould individual personalities.

At the beginning of this study a group of sixth graders was placed under a "microscope." What were the outstanding characteristics of the group? How did these come to be? What should be done about them? The teacher had known this particular class for several years. She had watched them working, growing, and finally arriving, in the sixth grade, at a fairly consistent mode of behavior. Just like every other grade they had a definite group personality. They had always been pleasant to teach. They did good, reliable work, followed directions perfectly, were always polite to each other, and to the teacher showed extreme courtesy. Their written work had been neat and technically accurate.

All of this was indeed commendable! But they had no sparkle! No sparkle in writing! No sparkle in speaking! No sparkle in listening! They were intelligent children, but something, their critical demand for technical correctness, perhaps, had suppressed a certain creative flare, a certain personal freedom, a certain daring reliance on self. Even the most outstanding in the class never quite freed themselves from this conservative influence. Could they, all of these years, have been afraid of making mistakes? Had they copied suggested ideas too long and lost a realization of the value of their own convictions?

As speakers they presented facts, but facts carefully divorced from their emotional reactions. How they, personally, felt or thought about the material, the listeners seldom knew. Nor did the listeners seem to mind! In like manner, they accepted these facts placidly. Just as the facts did nothing to the speakers, so they did nothing to the listeners! As an audience they failed to realize that they must do something more than listen politely. As a whole they were not an active audience for they seldom reacted, either positively or negatively, to expressed ideas.

This group needed, then, to select for discussion a subject of vital import to each child. The subject had to present a problem of real concern to the welfare of the group, a problem necessitating thorough knowledge and demanding a probable solution. The subject had to stimulate research of all kinds; it had to inspire personal observations and personal reactions. It had to be great enough to eliminate consciousness of *self*—a problem bigger than each individual child.

Analysis of Individual Needs: A determination of group needs gave the first clue to an analysis of the specific needs of certain individuals within the group. At the beginning of the project, an attempt was made also to discover the definite language problems of each person. A record was made of each child. With this first record as a guide the teacher could then trace individual progress throughout the year and determine at the end, each child's improvement in speech power. During an informal discussion, the teacher took notes on the ideas, attitudes, and understandings of each child as revealed through the mediums of voice and body. The following are examples of individual records:

W.E.: Is anxious to talk. Ideas, however, tend to be trivial. Doesn't talk very long at a time. In spite of eagerness frequently gets red in the face. Keeps hands in pockets.

K.B.: Likes to talk. Has many ideas but tends to monopolize time of class. Shows considerable *ego*. Has respect for accuracy. Is sincere and interested.

S.M.: Is very thorough, so thorough that she tells both important and unimportant details. Is overly careful and a little too critical. This is evident in her limited vocal power, her lack of facial expression, and her stiff body movement. Has the insight and intelligence to become a very interesting speaker, but needs to break down some of her reserve. She is very fair in her consideration for others.

H.R.: Is *confident* and *happy* and *eager* to talk. Gives vivid pictures of experiences. Can see he leads an interesting life. Smiles too much, suggesting some embarrassment. Keeps hands behind back. Considerate of others. Polite. Friendly. Tends to monopolize time through enthusiasm.

W.H.: Is timid, uncertain, and retiring. Seems to be afraid of things. Never talks very much or very loud. Has nervous hands.

H.D.: Speaks in a slow but reliable manner.

Sure of self. Very sincere quality in his voice. Needs to quicken his pace somewhat. Quiet and reserved attitude must be enlivened by his own opinions on the subject.

Class Activities: The class began with the consideration of how a group of people can help solve a given problem through a group discussion. Given a problem, they immediately concluded that the best way to solve it was by using all available facts. There followed a discussion of important sources of information: (1) Own observations, (2) Interviews, (3) Books, (4) Magazines, (5) Newspapers, (6) Pamphlets, (7) Pictures, (8) Movies, (9) Radios, (10) Graphic charts. They were interested also in the relative reliability of these sources. They recognized the great need for accuracy in a book that is to be a more lasting reference than a magazine or a newspaper. Agreement was general, however, that magazines, newspapers, and radios had marked advantages in giving timely information.

Realizing that any existing situation can be improved, provided people approach it with a fund of information gleaned from many sources, they looked for a problem near to them that might be attacked in just such a manner. It was at this point that the teacher first discovered certain timid children losing themselves and, as a result, giving, unknowingly, the best of themselves to the discussion. At just that time, weather conditions created many hazards to public safety. Streets and sidewalks alike were sheets of ice. With such a vital problem facing them, *Safety* was their logical choice for the first discussion.

Enthusiasm ran so high that at noon of the same day, material in the form of clippings from papers and pictures from magazines made a first appearance on their bulletin boards.

The next step was to divide the problem into its logical parts and assign to three committees the handling of each sub-division. The three aspects of the main subject of *Safety* were: I. *Safety at School;* II. *Safety at Home;* III. *Safety in the Community*. Three strong students were selected as leaders for each group. In the first group were placed the majority of the more timid in order that their similar abilities might necessitate more aggressive attitudes. In the second group was placed a combination of timid and aggressive in the hope that the mingling of types would encourage the one and level down the other. In the third group were put the most confident children in order that they might rise to new heights of self-confidence and eventually, through example, raise the standard of the entire class.

The leaders then took charge of the organization of all available material and assigned specific subjects to each individual in their group. Within each group there was insistence that they actually observe whenever possible, that they read carefully, and that they apply their own experiences whenever pertinent.

The school group began a survey of safety in their school building, actually observing hazards in rooms, halls, playgrounds, and on the way to school. The home group began a survey of safety in their own homes. The community group began a survey of safety in their city. All three groups sent questionnaires to children in the building asking for information.

Appropriate movies on *Safety* helped greatly in clarifying the particular problem of each child. As they continued this actual observation, they read widely and discussed their progress.

When they had become familiar with their material, standards were formulated for the presentation of each child's contribution to the final group discussion. The following are the children's suggested standards:

1. Talk from brief, well-organized notes.
2. Use large pictures and charts whenever possible to make ideas more concrete.
3. Bring out definite points by personal experiences.
4. Frequently interest your listeners and bring them into the discussion by direct questions.
5. Use descriptive gestures to make words more vivid.
6. Be prepared both to ask questions of others and to answer questions yourself when asked.
7. The leader will tie up all material so that a unified picture of his group's research may be presented.
8. Everyone should be happy and enthusiastic, and show the class how eager he is to talk.
9. The group should challenge each speaker by alert attention, encouraging him to express his opinions by polite and fair consideration for each speaker's ideas.
10. Let the audience as a unit find a solution for the whole problem, making definite

(Continued on page 234)

Teaching Rural Children Elementary Science

BESS L. CROFOOT

A BROOK at the side of a foot-hill in the Berkshires was the subject-matter used last summer in a study of conservation as needed on the school grounds of a one-room rural school at Lime Rock, Connecticut. The aim of this study was to interest boys and girls in one vital problem of the times, and to show how it could be tied up with other timely problems similarly studied. As the work developed, ways in which the children carried out their plans, and the place the teachers took with regard to the project gave valuable leads as to methods of teaching.

This article will deal only with the method used in this particular project, leaving the connections which it might have with other problems for another time. Perhaps what happened as these sixteen boys and girls of different ages made observations and recorded them, experimented, looked up references, planned what they would do next and why, has taken place in many parts of the country and in many schools. Nevertheless, it seems worth the telling, because of the breadth and richness of the learnings for both children and teachers.

Science out-of-doors with the schoolyard as a well-equipped laboratory—"Finds tongues in trees, books in running brooks, sermons in stones, and good in everything."

Miss Crofoot is with the Department of Field Service, State Department of Education, Canaan, Connecticut.

WHAT THE CHILDREN DID

This out-of-door study of science began with an examination of the school grounds and a decision as to the objectives. The boys and girls wished to save the banks of the stream from erosion, to find ways of conserving the wild plant life of the woods, and to find out how to increase the growth of grass on the hill-side. Many of their attempts to carry out these wishes failed, and they learned as much from their failures as from their successes. For example, they tried to change the current of the brook by means of a dam made of rocks and logs, but these were washed downstream during a cloud-burst. Then they tried placing rocks in different positions and watching them to see which ones kept their places after heavy rain, carefully measuring the depth of water from day to day. When the results of this labor were lost, they began to consider what others had done; they read for information, consulted engineers, and visited an old dam to study its construction. They were finally successful in making a dam which carried the force of the current against the rocks on the left bank instead of sweeping soil from the right side of the brook.

While this work on the dam was in progress, another group was working farther down the stream, trying to improve the appearance of a spot which had been ravaged by high water. They protected this area by adding smaller rocks to the larger ones that had been carried there by rushing water in the spring flood. A little pool formed behind this bulwark, and here a rock garden was built with stone steps leading down to the edge of the brook. After investigation and inquiry on the part of the group, plants were selected which not only would grow well in such a sheltered position, but which would give protection to the bank.

Terrariums and aquariums containing

tadpoles, newts, turtles, water bugs and minnows were made near the dam. When specimens escaped because of the high water, others were found and new homes were made for them. Faced with such practical problems as balancing an area, the feeding and care of water-life, and the behavior of fresh-water forms, the boys and girls hastened to books and to teachers or other authorities to secure information which was needed in the emergency.

While some members of the school group worked along the banks of the stream, another group examined the hillside where a better growth of grass was desired. A specimen of soil was sent to the State College, to be analyzed by experts, and while waiting for an answer to their request, the pupils placed different fertilizers on marked plots, so that they could see for themselves the effect of each kind upon the growth of the grass. When they came upon a large ant hill, this became a subject of intense interest. (The teachers utilized every fresh interest that was aroused, merely suggesting a starting point for study of this interest.) The ant-hill was cut in half and a glass front was placed across the section, so that the habits of the ant could be studied at first-hand. Among other things, the boys and girls wanted to know if the ants' behavior affected the growth of the grass. As a result of their observations and research, they asked that clippings of grass and a special type of fertilizer be added to the hillside during the summer.

From the woods at the top of the hill and from the meadow, some of the children brought specimens of plant-life, which they dug up and carefully replanted in a specimen garden, marking each one with its name. Next year it is planned to replant the small trees in a desirable spot on the school grounds. Ferns, small flowering plants and shrubs were placed in a garden at the side of the house, and as they handled and planted these growing things, the boys and girls identified them, learned their habits, and discovered which were plentiful and which needed protection from eradication.

Replanting in the specimen garden.

The bird bath proved another fertile source of interest and learning, for the disappearance of water from it led to an investigation of evaporation and its implications.

These children took their jobs seriously, working with absorbed attention even though nearly every day groups of adults gathered to watch their progress and to listen to their discussions and conversations. (These observers were a group from Interlaken Inn and were studying under Professors Mabel Carney and Gerald S. Craig.) They moved from brook-side to hillside, or from garden

They succeeded in making a dam.

to school-room to watch this experiment in finding out and utilizing the interests of rural boys and girls in science out-of-doors. They occasionally asked questions or made comments, and the pupils gave courteous attention to them and attempted to answer their questions, or told them frankly when they did not know the answer.

Sometimes the children turned to these visiting educators with questions which troubled them, but they depended mostly upon their own teachers to guide them in finding solutions to their problems. Often they arrived at conclusions which were false, but through additional experiences and consultation with authorities, they corrected many of their errors. Success in overcoming obstacles gave them intense satisfaction, as did also the realization that they were doing something really valuable in helping to conserve and improve the school grounds. In addition, they learned social lessons of value; for example, one pupil was heard to say, "Man can plan ways to control the elements of his environment, in some measure."

What the Children Learned

Some of the conclusions and learnings of the group, drawn from many sources, were noted by the teachers as they were expressed by the children in answering questions or in discussion. A few of these are as follows:

Water: Water changes the surface of the earth. It has a pressure of 62.5 pounds. Water causes soil erosion. It wears and breaks up rocks and dissolves such elements as salt and lime from the rocks. Soft water is free from minerals; hard water contains minerals. Water changes to vapor and rises, making clouds. When the atmosphere contains all the moisture it can hold, it is said to be saturated. The cooler temperature above the earth causes the moisture to condense and fall as rain. We must have rain because water is essential to man, animal and plant life. Wononscopomac Lake is the source of the school brook, and the lake is made by springs.

Soil: Particles worn from rocks make soil. Decaying stumps, trees, other plants and animals make soil. Bacteria and moisture help in the decay of plants and trees. Plants and trees help to hold the soil in place. The small children working in the tree garden learned how to put up boards to keep the soil from washing away. The State College will gladly test soils and report as to what is needed to make a particular soil fertile.

Ants: Ants help to aerate and fertilize soils. They work where it is dark. They will die without air. There are many varieties of ants. Ants adapt themselves well to new homes. Ant activities within an ant-hill are well organized. Ants use other insects for food as well as the sweet liquid which aphids give.

Plants: There are many varieties in plant families. Plants adapt themselves to new places if the soil and amount of moisture and sunshine are right. They need the sun for energy to run their factories. Leaves are factories where food

is prepared for the plant's use. Plants breathe in carbon dioxide and give out oxygen. Oxygen becomes less in the atmosphere as the distance from the earth increases.

Trees: There are many kinds of trees. All trees grow from seeds. Trees give us shade which helps to keep moisture from evaporating. Some birds build their nests in trees. Some birds eat many insects. The wind helps to carry insects and seeds to new places. Gall flies sting leaves and stems of plants and trees, and lay their eggs in them. The building of public highways is causing many trees and plants to be destroyed. Proper food should be made available in winter so that rabbits, deer and other animals will not eat the bark of trees. The garden group learned how to transplant flowering plants and trees.

Sun and Earth: The sun heats the earth. The center of the earth may be a hard mineral core or it may be filled with burning gases. The gravity of the earth causes objects to be attracted to it.

Dams: Construction engineers make plans before building their dams. Their plans are called blue-prints. Such printed plans help engineers to go about their work and do it more quickly.

Collecting: Specimens must have proper homes prepared for them before collecting begins. Before building an aquarium or terrarium, study and observation must be done to find out the proper plants, animals and foods to put in.

All of the statements above are quotations from actual conversations carried on by the children among themselves or with adults during their work. Besides the work with their hands out-of-doors, their activities were varied. They sat in the classroom and talked over puzzling problems; listened to reports; looked up information in books from the shelves; suggested different ways of working, changing the program to fit the need; wrote about their experiences or pictured them from day to day, placing the records where all could see them; reported their work and answered questions asked by others; went to an old dam and visited a forest to get definite help for the special groups working on these things; experimented to show how rain is formed, and the differences between hard and soft water; discovered for themselves how plants give off water, and the saturation point of water with salt; measured the force and pressure of water and compared the buoyancy of salt and fresh water; demonstrated that plants give off oxygen and that growing plants need moisture and light; tested soils and fertilizers; found the effects of acids and alkalines upon litmus paper.

The conclusions of the observers who watched the work develop from day to day may be of interest. These men and women suggested that this and similar work would constitute a valuable program for science in rural schools. They felt that these pupils were interested in the content of a science program, and that they had grown and developed through this project; some individuals had learned to talk more freely; others had learned to sustain interest and to see their problems through to the finish; still others learned to suspend judgment until an authority could be consulted; and they all learned to work with and for others. If sustained attention is proof of interest, these sixteen boys and girls enjoyed their "science out-of-doors."

EDITORS' NOTE:—*Repeated requests for help in planning worthwhile and effective festival celebrations for both Thanksgiving and Christmas and for suggestions for gifts young children can make for their parents and friends indicate the need for an issue of* ***Childhood Education*** *which will answer some of these requests. If your Thanksgiving and Christmas festivals this year have been successful, will you correspond with the Editors so that they may have the benefit of your suggestions in planning a special December issue for 1938.*

Number In a Second Grade Study of Indians

EDWINA DEANS

NUMBER teaching must be vital and alive. But this is not enough in itself: it must lead somewhere, namely, to the development of meaningful number learnings. To achieve these ends, number teaching must be systematic.

Practical suggestions for making number experiences more meaningful through systematic teaching rather than depending upon incidental learning.

Miss Deans is a teacher of seven-year-olds in Greensboro, North Carolina.

POSSIBLE DANGERS IN EXCLUSIVELY INCIDENTAL INSTRUCTION ON NUMBER

The practice of correlating number with general units of work unquestionably provides interesting and vital number experiences. Among other things, children taught in this way have opportunity to see number as truly useful and valuable and thus to discover a powerful motive for learning arithmetic. But we may go too far in this matter of unit-teaching.

There is reason to believe that the attempt to have all number teaching arise from the unit of work may result in losses in those phases of arithmetic which follow from systematic number teaching. The products of the learning may be new interest in number and a strong desire to learn more about it, quite without real understanding of number as such and without rich number meanings. Then, too, the unit of work often affords very few number experiences and thus defeats one of the major purposes for which it was intended: providing an abundance of experience. One experience with a given kind of number situation has been accepted, knowingly or otherwise, as sufficient to insure both fullness and permanency of learning. Our theory at this point is better than our practice: we know that *many* experiences in *many different situations* are essential to meaningful learning, and this fact holds for arithmetic no less than for all other branches of knowledge.

PRE-UNIT NUMBER EXPERIENCES

This article reports an attempt to use a unit of work on Indian life to furnish a large amount of number experience for a second grade group.[1] At the time of this unit the children were ready to begin their study of the combinations for the number 14. Previously they had engaged in many number activities designed to teach the meaning of the numbers from 10 to 20.[2] These activities had been provided both with concrete and with semi-concrete materials. They had also engaged in the activity of discovering the combinations in the span from 10 to 20 with the use of both concrete and semi-concrete materials.

---

[1] Lest the reader think that the activities described here were monotonous and even formal, let me say that any description of an activity almost certainly creates an impression of dull unattractive routine, while in reality this need not necessarily be the case at all. The enthusiastic responses of the children to these learning situations gave evidence of the fact that they were sharing together pleasurable activities. At all times the procedures were most informal. Oftentimes the children themselves suggested the next activity to be carried out with concrete objects.

[2] Readers who are familiar with the "Jolly Numbers" workbooks (Ginn and Company) will note the similarity between the theory and the teaching devices described in these pages and the corresponding theory and devices recommended in the "Jolly Numbers" Manuals. As a matter of fact, the writer was one of the teachers who cooperated in the experimental tryouts of the "Jolly Numbers" workbooks, and it was the impossibility of using these workbooks during the last school year which led to the preparation of the materials herein reported.

It was not expected that the children would learn the combinations at this stage. The intention, rather, was to teach them how to find answers to the combinations through combining and separating groups of objects. These experiences proved a decided advantage in helping the children toward a more complete understanding of the larger numbers. Following the initial discovery and isolation of the combinations for all of the numbers 11 to 20, each of the numbers 11, 12 and 13 was studied intensively in much the same manner as is herein described for the number 14.

Introduction to the Addition and Subtraction Combinations Through the Unit of Work

The early activities used in the study of the combinations for 14 consisted in the rediscovery of the combinations on the concrete level. The first instructional step was to create a real need for knowing the number 14 and all its component parts at this time. The need was made to arise out of the unit of work which had been started on Indian life. Each of the 45 children in the room made a clay bowl. It was necessary for them to take turns painting their bowls as only a limited number could paint at one time. The first day 6 children painted their bowls. The second day 8 children painted. On the second day the children wanted to know how many bowls they had painted. As a means of guiding them in finding the answer for themselves, they acted out the problem which had been presented, as follows:

The children who painted their bowls yesterday will stand over here in a group. How many children are in this group? (6)

Now the children who painted their bowls today may stand over there in another group. How many children are in that group? (8)

How many children altogether? (14) To find how many in all, the children began with the 8-group and counted 9, 10, 11, 12, 13, 14. As each child in the 6-group was counted he walked over to join the 8-group. Thus the children found the total to be 14.

We have 14 children. Do we have the same number of bowls as we have children? Then we have how many bowls? (14)

Now let's see what else we can do with these groups. The children who painted yesterday may go back to their tables. We had how many children in all? (14)

How many children went back to their tables? (6)

How many children are left? (8) The 6-group was then asked to rejoin the 8-group so as to make the total of 14 again. This time the 8-group was taken away. Each time the children were encouraged to tell everything that happened. We had 14 children in all. We took away 8 children and we had 6 left.

The next step was to follow the same procedure in grouping and regrouping the 6 bowls painted the first day and the 8 that were painted the second day.

This discussion will suffice to show the possibilities for discovering all the addition and subtraction facts about 6, 8 and 14 by working with various groupings of these numbers. Other possibilities for the concrete discovery of the combinations for 5, 9 and 14 resulted from the fact that 5 of the above children were boys and 9 were girls.[3]

By engaging in activities of the kind which have been described, the children were actually acting out the processes of addition and subtraction and thus learning, besides the number facts as these are usually thought of, the meaning of the operations by which these facts are made possible.

Continued Study of the 14-Facts by Means of Concrete Objects

Next, after this initial discovery of the combinations for the number 14, each individual child was given the opportunity of further discovery for himself. The learning activities were still on the concrete level, and the materials provided were acorn caps,

[3] It is evident from the discussion above that these activities were planned so that the desired number learnings would result. If definite planning had not taken place, these particular number groupings would probably not have occurred; or if they had occurred, they would not have been recognized and used.

colored sticks, buttons and small cardboard cut-outs. The children were directed and guided in their use of these materials. For example, they were asked to carry out the following activities:

Count out 14 acorn caps in all. Let's see if we can make two smaller groups out of our big group. Put 5 acorn caps in one group. Then see how many you have in the other group. (9)

Let's make up an Indian story to tell about your acorn caps. Make a "put together" story. You can pretend that your acorn caps are canoes, Indians, arrowheads or anything you wish. (As one child told his story the other children pushed their groups together and saw that when they added, or put things together, two small groups were merged into one larger group.)

Now you have your 14 all together again in one big group. Who can tell a "take-away" Indian story?

There were 14 canoes on the river. Five of them rowed to the shore. Then there were how many canoes left on the river?

Again the children dramatized the story as it was told by really taking away the 5 and by finding out how many were left. A similar procedure was followed for all the other combinations for 14. Interest was sustained by varying the materials as well as the activities.

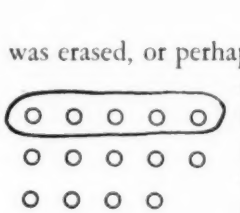
Other activities with these materials proved attractive and valuable. In one of these, the children built the group of 14. They took away a given number, say 6, and estimated the answer. Then they counted to discover if their answer was correct.

In another activity the groups were arranged to show 10+4=14. Then one object was taken away from the 10-group and added to the 4-group. The new group 9+5=14 was read. Next, one object was taken from the 9-group and added to the 5-group, and the resulting groups were again read. This activity continued until the groups ended with 4+10=14.

In still another activity, groups of objects were drawn on the board and the children were asked to build the same groups at their tables and to make their groups look exactly like the pictures at the board. For example, they built 14 this way.

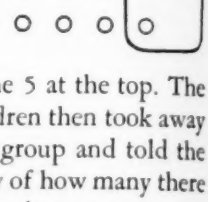
The children were then asked to take away the number that was erased by the teacher. The 5-group at the right

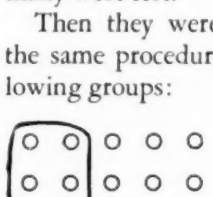
was erased, or perhaps the 5 at the top. The

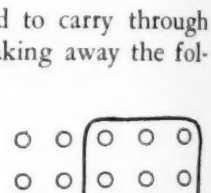


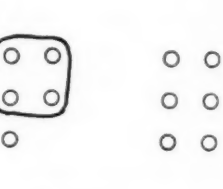
children then took away this group and told the story of how many there were, how many were taken away, and how many were left.

Then they were asked to carry through the same procedure in taking away the following groups:









In each case it will be noticed that the remainder is a readable group, or one that can be recognized readily without counting.

The children learned, too, to build two groups such as

and

and to tell the whole story about the two groups: 6 and 8 are 14; 8 and 6 are 14; 14

take away 8 are 6, and 14 take away 6 are 8.

In telling the imaginative Indian stories about the concrete objects, the children most often used the take-away idea in subtraction. In order to give practice in dramatizing the other subtraction ideas (the "difference" idea, the "other part" idea and the "how many gone" idea) the children were encouraged to make pictures for stories like the following which illustrates the "other part" idea: An Indian woman had 6 poles for her wigwam. She wanted 14 in all. How many more did she need? And like the following which illustrates the "difference" idea: There were 14 Indian men in a long canoe and only 5 Indian men in a little canoe. How many more Indian men were in the long canoe than were in the little one?

At first in illustrating the difference idea in subtraction, both groups were represented and the difference was found by matching the two groups, item for item. Later, the children learned that for this kind of a story they should subtract. When this was understood they realized that two groups were no longer necessary since they could tell the same story by taking away the smaller group from the larger one.

Semi-Concrete and Imaginative Experiences with the 14-Facts

When it was thought that sufficient experience had been provided with the number 14 on the level of actual objects, the children were guided through a series of activities on the level of pictured objects. These activities took the form of an Indian number booklet. The different activities organized around the booklet included: (1) intensive study of the addition and subtraction combinations, (2) organization of the addition and subtraction combinations, with whole stories, (3) reading and solving verbal problems, and, (4) abstract study of numbers. These activities will be discussed and illustrated in order.

Intensive Study of the Addition and Subtraction Combinations: The activity used here was that of having the children draw an Indian picture from directions. The picture was later used for isolating and identifying the number groups. In the first picture of this kind all the combinations for 14 were represented in the one picture. (Chart I) This was followed by a more intensive study of the number groups

CHART I

How to Make an Indian Picture

Draw a pattern for a big canoe.
Draw a pattern for a little canoe.
Cut out your patterns.
Trace 5 big canoes. Put the big canoes in one group.
Trace 9 little canoes. Put the little canoes in another group.
Color 6 of your canoes green.
Color 8 of your canoes brown.
You may draw designs on your canoes if you wish.
Draw Indian men in 7 of your canoes.
Do not draw any Indian men in the other 7 canoes.

Number Stories About Your Canoes

You made	big canoes.	5	9
You made	little canoes.	+9	+5
5+9=	9+5=	—	—
		14	14

You have	green canoes.	6	8
You have	brown canoes.	+8	+6
6+8=	8+6=	—	—
		14	14

Cover up the big canoes. 14—5=
Cover up the little canoes. 14—9=
Take away the green canoes. 14—6=
Take away the brown canoes. 14—8=

You put Indian men in ..... canoes.
You have ..... canoes with no Indian men.
7+7= 14—7=

Make up some stories about Indians.[4]

6	8	5	9	14	14	14	14
+8	+6	+9	+5	—6	—8	—9	—5
—	—	—	—	—	—	—	—

[4] The abstract numbers at the bottom of this chart were of decided worth in providing further experience with the number groupings for 14. By using the picture which had been made from directions the children again found and isolated their groups to tell the Indian stories for the combinations. They also used these abstract number combinations for making original stories or problems about Indians.

5 and 9 and 14, (Chart II, 6 and 8 and 14, and 7 and 7 and 14. A picture was made to illustrate each of these number groups.[5]

The check-up on these pages offered further valuable number experience. The pages were read orally and freely discussed by the children. Under the guidance of the teacher the children combined their picture groups to find sums and covered up groups to be taken away in order to find remainders.

The picture groups were also used for telling the whole story. For example, by using the wigwams drawn from the directions in Chart III, one of the children told the following stories:

"Five wigwams and 9 wigwams are 14 in all. Nine wigwams and 5 wigwams are 14 in all." Then covering the 5 wigwams with his hand, "14 wigwams take away 5 wigwams leaves 9. Fourteen wigwams take away 9 wigwams leaves 5." While the whole story was being told, the other children found it in their own pictures.

Organization of Addition and Subtraction Combinations: Two pages of the booklet were devoted to the organization phase of number learning. The activity for the addition combinations consisted in presenting the child with a mimeographed sheet of six Indian head-dresses. On each head-dress a given number of feathers was drawn and the child was asked to draw enough more feathers in each case to make a total of 14 in all. The corresponding subtraction activity consisted in crossing out a given number of arrowheads in order to find the remainders.

Reading Problems: Preceding this activity much practice was given in imagining problem situations and solving problems which were read orally by the teacher. Then, the children were given a mimeographed sheet containing ten problems which they read and interpreted, entering the answer on the blank line and telling the story with numbers in the box at the right. Some of the problems were taken from real classroom situations. Others were purely imaginary. (See Chart III)[6]

[5] The booklet included similar pages taking care of the intensive study of the combinations for 6, 8, 14 and for 7, 7 and 14. The illustrative pages are omitted in order to conserve space.

[6] The reader might well raise a question as to the reading difficulty of the problems in Chart III. The fact is that the reading activities which accompany any well-planned unit of work amply take care of vocabulary difficulties. The same vocabulary is used in arithmetic as is used in reading. This is decidedly a factor in favor of the method of approach which has been described in this paper. In this particular unit on Indian life, the children kept records of their activities, read many Indian stories from books, composed and read many stories on Indian life.

CHART II

How to Make Your Picture

Draw a pattern of a wigwam. Cut it out.
Trace 14 wigwams from your pattern.
Trace 5 wigwams in your first row.
Trace 5 wigwams in your second row.
Trace 4 wigwams in your third row.
Make round doors for the 5 wigwams in the first row.
Make pointed doors for the other 9 wigwams.
Color all the wigwams brown. You may draw designs on them if you wish.
Draw smoke coming out of the last 9 wigwams.
Do not make smoke coming out of the other wigwams.

Number Stories About Wigwams

How many wigwams have round doors? 5
How many wigwams have pointed doors? 9
How many wigwams do you have in all? 14
5+ = 9+ =
Smoke is coming out of ..... wigwams. 9 5
Smoke is not coming out of ..... wigwams. + +9
9+ = 5+ = 14
Cover the wigwams with round doors. 14—5=
Cover the wigwams with pointed doors. 14—9=
14— =9 14— =5
Take away the wigwams with smoke coming out. 14—9=
Take away the wigwams that do not have smoke. 14—5=
14— =5 14— =9
Make up some stories about the Indians who live in these wigwams. Tell your stories to the other children. Make stories for these numbers.

5	14	14	9
+9	—5	—9	+5
—	—	—	—

CHART III

Indian Stories

1. An Indian boy has 5 feathers. He wants 14. How many more feathers must he get?

2. An Indian man had 14 feathers in his head-dress. He had 6 feathers on his pipe. How many more feathers did his head-dress have than his pipe?
3. We have 13 Indian rattles. We have 8 drums. We have how many more rattles than drums?
4. An Indian woman made 7 clay bowls in one week. The next week she made 6 more bowls. Then she had how many bowls?
5. Today 14 boys danced the war dance and 8 boys played the drums. How many more boys were dancing than were playing drums?
6. 5 Indian squaws were planting corn. 9 more Indian squaws came to help. How many Indian squaws were planting corn then?
7. A little Indian baby was in a tree. 8 birds and 6 squirrels came to play with him. How many animals came to play?
8. A little Indian boy had 14 arrows. He shot 9. How many arrows did he have left?
9. We have 8 Indian drums. If we wanted 12, how many more would we have to get?
10. A boy has cut out 4 feathers for his Indian head-dress. When he cuts out 8 more, he will have how many feathers in all?

Of much value to the children was the oral work on the problems which teacher and pupils "talked out together." The children read the problems orally and were led to analyze them into the correct process to be used for each. They were often asked to tell why they should add in this particular problem and why they should subtract in that one. Often difficult problems were dramatized in order to clear up vague ideas as to meaning.

Abstract Number: At this stage, cards containing the combinations for 14 were mixed with those previously learned for the numbers 11, 12 and 13. Before automatic response was expected, the children were given ample opportunity to tell their answer and to defend it. "How do you know?" and "How did you get it?" were often asked with regard to the answer. Children who had difficulty were encouraged to use the doubles and 10 as bases for arriving at solutions for their facts. The child who could not give an immediate answer for 6 and 8 was asked "6 and 6 are how much?" and then, "How many more is this than 6 and 6?" He would see that the sum was 2 more, and so his answer would be 14. For 5 and 9 he was asked, "How many are 5 and 10?" then, "If 5 and 10 are 15, what are 5 and 9?"

Another phase of drill was the use of small individual drill cards. The children worked in groups of two or three, studying and hearing one another say the answers. In this drill they worked for speed and automatic response.

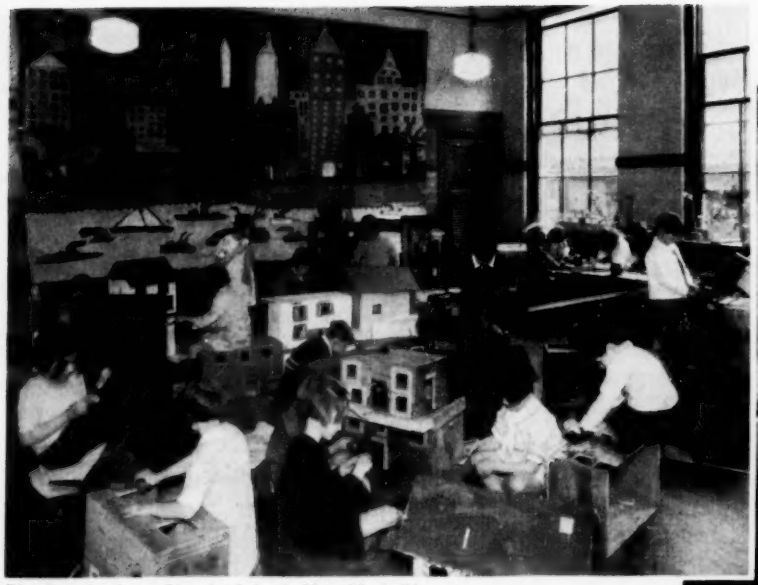
Opportunities to Apply Previous Number Learnings

In addition to furnishing situations and needs for the learning of new facts and skills, the unit of work offers a fine opportunity for children to apply previous learning in number. The following are samples of some of the occasions in which these children recognized the opportunity for using the number knowledge they had already acquired:

Comparing number of feathers on Indian head-dresses.
Finding out how many more Indian rattles would have to be made before everyone in the dance could have a rattle.
Keeping individual checks on the number of Indian books and Indian stories read.
Making and painting clay bowls.
Making and painting Indian drums and tomahawks for the war dance.

Concluding Statement

In conclusion, this paper shows (1) how number experiences may be selected out of a unit of work to fit into the child's level of number understanding and his stage in number development, (2) how by providing appropriate activities which will extend number learnings beyond the unit of work itself, the teacher can do much to make number more meaningful for the child, and (3) how the unit of work may afford many valuable opportunities for the application of previously acquired number learnings. The child should be encouraged to apply his knowledge on every possible occasion, both inside and outside the schoolroom, for number takes on meaning and significance when he is able to use it in many situations.



Photographs from Lincoln School, New York City

Above: A second grade prepares for "community" living in the schoolroom.

Center Below: The library table is an important part of the equipment in a primary room. A "free" reading period.

Below: A fourth grade boy working out ways of demonstrating the principle of an electric motor for an assembly.

leork Periods

Above: Plastic materials serve the purposes of dramatic play during a work period in the first grade. Small toys greatly enrich such play.

Center: Second graders doing individual work in reading.

Below: Sixth grade children working out schemes for explaining early time-keeping devices.

Independent Work and Play Periods

REBECCA J. COFFIN

INDEPENDENT work and play periods are looked upon as natural parts of a child's life. They are times for active learning which are free from adult domination and dictation. The materials and set-up, then, should be primarily those which a child can adapt to his own ends, be they play materials or practice materials. If these periods are considered in the light of the child's physical, social, emotional and intellectual growth, the ability to read, write, add, subtract, spell and learn facts will not be the end-point. Work periods need to be examined from the standpoint of their contribution to the opportunities to adjust to other children, to the opportunities for natural expression, and to the opportunities to work at something which gives satisfaction. These periods may also contribute richly to a child's respect for what others are doing, and to his increasing independence and self-confidence.

Modern schools look at the independent work or play period as a way of working and playing which contributes to a child's development in special ways, rather than as an administrative device for planning units of time. They vary in kind, in purpose, and in their methods of organization. Free play periods with a variety of materials are characteristic of the kindergarten levels; free play continues to be important on the first grade level and beginnings of self-chosen practice periods are also to be noticed here. The second grade becomes more serious and has a "free work" time in which are evident more definite purpose and continuous effort. "Assigned" but not "imposed" practice periods and quiet work periods for study begin also to meet a need. Before a child has lived through his third grade year, he is working independently at writing a story, at reading, at spelling or at number work. A class of fourth grade children recently planned a program for their mothers and prepared and served the refreshments—all independent of their class teacher.

What independent work and play periods should mean to children; the materials to use; what to expect of children of different age levels; standards for judging work and what determines them; the importance of work periods for practice in acquiring skills in the three R's, and the part the teacher plays.

Miss Coffin is Principal of the Elementary Division, Lincoln School, New York City.

PLAY MATERIALS

Given adequate time and suitable materials, a child will play! His natural way of learning is through voluntary activity undertaken more for itself than for some remote end. Along with this natural desire to be active goes the impulse to experiment. Through these two avenues the child gains most of his behavior patterns. These are the basis of education for young children. Play materials, then, become of utmost significance in the set-up of a primary school. The reports of experimentation tell us that building blocks rank high in popularity with boys, and that paints, clay and sewing materials rank high with girls. We know that cardboard and paper construction are not popular.

For the youngest child play materials include physical apparatus and those through which he can dramatize home life. Throughout the kindergarten and primary grades are needed work benches, tools and wood; simple science equipment; blocks; books; bulletin boards and screens for pictures and clippings; clay, paints, crayons, and sewing materials. For purposes of stimulating and

enriching dramatic play through which the child reorganizes the life about him, small toys such as boats, trains, trucks, animals and rubber dolls from the five and ten cent stores have been found very helpful. All these materials and others need to be selected with the child in mind who is to use them. They need to be chosen carefully for their artistic merits and their durability as well as for suitability.

Care and thought in arranging these materials attractively and neatly so that they are easily accessible serve to reduce confusion and at the same time to make the materials inviting. The children should, of course, be helped in learning how to select the materials they wish to use and how to care for them. Materials that are disorderly only add to a child's insecurity and confusion.

A program which has for one of its main objects the development of worthy individual effort on the part of the children will have many different activities in progress at the same time. This implies not only a rich variety of materials, but also sufficient space for the activities.

There is need for space for block construction, for a library table, or for a sewing group. A science table or shelf, and the work bench with its equipment and attending vigorous activity call for space. An easel for painting and a table for the paints; a table on which to make the clay animal or the dish for the play house, too, call for floor space.

Different Age Levels

The teacher needs to keep in mind certain outstanding characteristics of different age levels, if she is to plan and guide independent work and play periods wisely.

The kindergarten aims to increase the child's physical accomplishments. It is also concerned with work habits. Do the children stay with their jobs until they have finished them? Do they take care of the materials they use? Are they beginning to be independent in making choices, and in carrying on a piece of work? Are they showing signs of being able to criticize their own work and to accept suggestions and criticisms from others? In addition to attention to work habits it is important to remember that kindergarten children are noticeably creative. They try various kinds of plastic materials, not alone for the joy of manipulating them but for the purpose of expressing an idea.

In the *first grade* children are increasingly able to work with other children and to subordinate their own immediate desires for the well-being of the group. Their play materials still include most of the materials already discussed. Appreciable growth is noted in the ability to plan ahead and to carry out more complicated schemes. These children are beginning to be much more conscious of standards. A six-and-a-half-year old was observed to spend his work periods of an hour on each of two consecutive days tearing down and rebuilding his steamer, "The Queen Mary," because the proportions did not satisfy him.

Only a small number of the children at this age level should try to learn to read if the large number of first-grade failures throughout the country is indicative of the lack of the suitability of reading as an activity for these children. Success in the complicated technique of learning to read is based on the child's ability to focus his attention on one idea for a period of time, on his ability to associate the meaning of a word with its symbol, and on his ability to discriminate between words.

Activities, therefore, that contribute to these ends should be justified on the basis of reading readiness—the actual instruction in beginning reading to follow when an adequate basis has been prepared. An examination of many first grade programs will reveal practice periods devoted to developing skill in reading that could better be given over to work and play periods that would contribute to reading readiness.[1]

[1] A First Grade at Work. *By Lula E. Wright. New York City: Bureau of Publications, Teachers College, 1932.*

Seven-year-olds seem to be much more purposeful and serious in their play than six-year-olds. Thinking becomes more consecutive and the play materials such as blocks are gradually discarded in favor of more permanent materials—the house of blocks becomes a house made of wood. Play at this stage is based more often on the child's observations of work and play in the grown-up world around him. The equipping of a house and the developing of the inter-relationships of this house to the other and varied types of houses within one play scheme in a room may extend over weeks or even months.

The Teacher's Part

It is important that the teacher conceive of children as active, and of her contribution to independent work periods as that of helper, not dictator. She provides an environment rich with educative possibilities; she gives suggestions and criticisms when needed; she encourages the children to criticise. For the child who seems to have no ideas of his own the teacher suggests that he make something with clay which he would like to take home; or she engages him in conversation to find out about his interests.

The teacher keeps in mind the kinds of activities a child has engaged in over a period of time and perhaps stimulates him to a change of activity. She constantly keeps in mind whether a child continues on the same level of activity or whether there is evidence of growth in his activity. From among the great variety of activities it is the teacher's responsibility to decide which ones to encourage and which to discourage.

While the teacher strives constantly to help children become independent of her in solving their problems, she has a genuine place in the life of the group. Through her understanding of the stage of development of their interests and their powers, she knows when to introduce a new experience through an excursion or perhaps a new material. She knows, too, when an activity has ceased to fire the imagination and purposes, and when to encourage new ones.

Upon the teacher's insight depend the outcomes of the independent work period. She is responsible for choosing the types of material suitable to her particular group. She needs to be careful not to set up a situation that is too stimulating nor to permit a child to set up a standard for himself which is so high that only discouragement can result. She watches to see that he does not become fatigued. She encourages different types of children—the shy child and the dramatic child—and protects the child who has done his best, from unfavorable criticism.

As a child becomes dissatisfied with his results and his techniques, the wise teacher is ready with instruction. This is generally individual, though at times it may include a group. A child needs to be shown how to use certain materials before he establishes unsatisfying techniques which become increasing handicaps. He needs to know that paint will not drip or run into undesired places if the brush is wiped off, that scissors cut more easily if the cloth reaches far back between the blades, that a knot at the end of a thread will keep it from pulling out. There is no especial virtue in "not showing and not telling a child anything" or in being able to say, "He did it all alone," as some extremists would lead us to believe. In the meantime, the child may have had so many unsatisfying experiences that he will not wish to continue with an activity or he may have established habits that will handicap him.

It is a great temptation for a teacher to be interested in certain types of children and to justify certain kinds of activities that appeal particularly to her as a person. She herself must be free also from strain, as tension on her part is very readily communicated to a group, if the children are young.

Individual records are essential for the

Carrying the Mail—A Second Grade's Experiences. *By Avah Hughes. New York City: Bureau of Publications, Teachers College, 1933.*

wisest child guidance in independent work periods. These records may be rich in detail if sufficient help is available, but some record of group and of individual activities is necessary. They are the basis of a teacher's suggestions and of the evaluation of her own part in guiding the child's work.

Programs

All primary programs should provide work periods consisting of uninterrupted blocks of time of at least an hour for individual free activities. In the kindergarten there should be two such periods, one out-of-doors where children can use play materials consisting of large hollow blocks, packing boxes, boards, and climbing apparatus. There should also be an hour for work or play indoors during which time clay, paints, smaller building blocks, and small toys are the materials with which he plays. In many localities the climate makes it possible to work out a set-up where the in-door and out-door activities do not need to be separated. These situations are fortunate, indeed.

In the first, second, and third grades, teachers and children are very favorably inclined toward a "free work period" during the first hour or hour and a half of the morning. One seven-year-old said, "Let's have free work the first thing because we've been quiet so long. We have to be quiet when we're getting dressed, quiet when we're eating breakfast and quiet while we're coming to school." In all probability this was an exaggerated statement, but that was the way he felt about it!

Other work periods are provided during the day for six-, seven- and eight-year-old groups as there is need for them. In the second grade where children begin to feel a need for and have an interest in improving their skills it is important to provide for short quiet periods when individuals and groups can practice reading, writing, and have a little time for working with numbers.

At all times the program-maker keeps in mind the all-round development of the child, and makes "flexibility" her watch-word. Conference periods in which individuals, small groups, and at times the whole class discuss plans, stop to evaluate work, or make criticisms should be included as there is need. In modern schools the old formal "preparation" period is noticeable by its absence. Gone, too, is the "recitation" period.

Schedules consisting of short periods during which groups follow teacher direction, acting all together, are almost sure to result in tired and inattentive boys and girls. Periods vary in length according to the kind of activity and according to the needs of the children. Spontaneous interests without too much "teaching" and too much "holding the attention" should be the basis for the activities. Children need time for leisure—time to talk informally with each other, time for investigating and exploring and looking at picture books, and time in which to read and to investigate to no particular end.

Standards for Judging Work

The experience through which the child lives is more important than the product. It is in the doing that he gains most of his satisfactions. The finished product is, however, indicative of the growth of the child. More often than not these end results or products have charm of arrangements of color, and do give satisfaction to the child himself and to the adult. As a child matures he becomes more and more critical of his products. He will work long and arduously to produce a bridge, a house, or a picture that satisfies him.

The standard of success, then, must be varied according to the readiness and ability of the individual. Failure which is a natural part of an undertaking and which is surmountable by increased effort is a part of growth. In contrast with this is failure which is the result of lack of ability on the part of the child to understand and attain artificial standards and requirements set by adults.

Emphasis on perfection of results is fatal! This is true whether it be in singing a song, writing a story or verse, making a rabbit house or painting a picture. When the child has a sense of familiarity which comes through play or work with materials, and himself feels dissatisfaction with his work, suggestions and help function because the proffered help fits exactly into the situation.

Work Periods for Practice

Specific skill and special information are developed all too often at the expense of an interest and desire on the part of the child himself in acquiring such information and skill. Too often schools have lost sight of the whole personality—the child's motor behavior, his habits, his social adjustment, personality traits, and intellectual capacity in their anxiety over specific ends. The striving for set standards of accomplishment in work periods may contribute to inadequate personal adjustment. Using efficiently the ability one has, and getting satisfaction from relationships with individuals and with the group is by far more important than finishing page ten in a workbook in five minutes!

In modern schools abundant opportunity is given for active creative thinking from the earliest stages. The information acquired and the relationships thus discovered increase in amount and complexity as the child develops. The improvement in skills is also necessary to a continuous development in any line of endeavor. The effort to improve or to find better ways of working should follow the need instead of preceding it, as in the traditional school. Because of the firm hold that drill for drill's sake has on schools, the place and use of practice materials need constantly to be scrutinized. On the other hand, progressive and informal schools are somewhat inclined to rest their case on incidental learning. While they can be sure a child is learning something, they cannot be sure just what he is learning. In cases where a child's efforts need to be directed toward specific learnings, practice materials carefully prepared and thoughtfully used serve his efforts more effectively than incidental practice. From the age of six we see constant evidence of children's interest in acquiring new relationships, new techniques, new information.

On many occasions, particularly with seven-year-olds, activities in which the children engage show them a need for skills and information. Often these needs can better be cared for if a definite "quiet" time in the day be provided. Spelling, reading, numbers, and writing are better cared for in this way.[2] At this stage, practice materials suited to the individual's needs should be provided.[3]

In general, these materials are more effective if related to the child's own experiences or to the experiences of the group. But oftentimes this is not possible because the teacher has neither the time nor the energy to give to their preparation. A number of commercial materials are now available which are based in the main on children's interests, though these are often less effective than are those prepared for the individual who is to use them.

Just as boards of education and administrative officers are inclined to impose situations on schools that are impossible from an educative point of view, so teachers and communities are inclined to accept these conditions as irrevocable. Given an overcrowded primary room of forty or more children, one teacher, and little or no equipment—and it is unthinkable that real individual or group development can take place. Here, only dictating, repressing and conforming, which call into play senseless "busy work," is the order of the day. Contrast these periods of aimless and pointless occupation with work and play that is genuine and challenging.

---

[2] Many suggestions and full bibliographies regarding methods and materials for working with the skills are to be found in *Learning the Three R's: A Modern Interpretation*. By Gertrude Hildreth. Minneapolis: Educational Publishers, 1936.

[3] A discussion on the selection, use and care of practice materials is to be found on pages 614 to 631 of the *Teachers' Guide to Child Development for Kindergarten and Primary Teachers*, published by the California State Department of Education, 1930.

Courtesy Henry M. Howell, Los Angeles Public Schools

Which Way Is North? Learning to Find Directions

KATHERYNE THOMAS WHITTEMORE

THE TEACHING of directions in space and on maps provides an excellent example of the importance of an orderly procedure in the teaching of map-reading skills. The number of children and adults who fail to interpret direction on maps in terms of directions in space testifies to the need for such instruction. One among many cases was that of the college student who stated that for many years she had thought there were two unrelated sets of directions, one in space, another on maps. A famous cartographer acknowledged that because he studied the geography of North America with the map hanging on the south wall of the room he

Suggestions for teaching directions in space and on maps, and differentiating between "up" and "north." Concluding article in a series of three on map-reading skills.

Mrs. Whittemore is Head of the Department of Geography, State Teachers College, Buffalo, New York.

always thought of the Atlantic Ocean as lying to the west and the Pacific to the east.

Teaching Directions in Space

A child must have some idea of directions in space before he can read direction from a map. This does not mean that he must always know directions wherever he is. Few adults would like to meet that requirement. He should, however, know how to find directions from the noon shadows and what the directions are both outside the schoolhouse and in his own classroom.

Miss Logan in her article, "My Shadow,"[1] made excellent suggestions for the study of the sun as a unit in science. She described as one activity the tracing and cutting out of the shadow of a child at different times of the day. Miss Logan did not suggest this exercise as introductory to work on direction, but it might well be so used. The observations would contribute several essential understandings: first, the position of the shadow on the side of the object away from the sun; second, the changing position of the sun during the day and the corresponding change in the length and position of the shadow; and third, the relationship between noon, the highest position of the sun, and the shortest shadow.[2]

Interest in direction may arise or be stimulated in several ways. A child may leave school to go South for the winter. A discussion of direction may result from the taking of a class excursion. When the point of readiness is reached and the proper observations of the sun have been made, the teacher makes the simple statement that at noon, when the sun is highest and the shadows shortest, our shadows fall north, and the opposite direction is south.

East and west must be taught to young children in their relation to north and south as they cannot be expected to observe the rising or setting sun, to understand the variations in the place of rising or setting, or to carry directions so gained with them from home to school. Since east and west must be located from north, care must be taken to prevent the association of direction with a certain body position or a certain place. Many readers can, like the author, recall the appearance of that part of the schoolroom which they faced when reciting the directions. Those who were taught that north was toward the apple orchard, toward the piano, or toward the flag could not carry their landmarks into other situations.

The directions should be found from the shadows at noon on the playground, and in the schoolroom. Short excursions can be made to other parts of the building where the shadows can be observed from various windows. One first grade enjoyed a noon walk around the school block, stopping at each corner to observe the shadows of the trees and to point north, south, east, and west.

This teaching of direction is not done in a day, yet it need not occupy many minutes all told. It must be carried on a little at a time, most of it at noon, on sunny days, over a considerable period. Drill is necessary, but it can be done briefly, from time to time, in the form of games. Nor is the work with direction completed in the first grade. The second grade teacher should not feel that the work has been finished. The children have come to a new room and she must assist them in orienting themselves in their new surroundings. It would be well to review directions outside; then, if possible, to observe shadows from the windows of the new room, then to find the north wall of the room, or the north corner as the case may be. Each fall, when the class arrives in a new room, the process should be repeated.

Directions on Maps

Class or individual expression of location may result from an excursion before any

[1] "My Shadow." By Geneva A. Logan. *Childhood Education*. June, 1935. 11:405-407.

[2] Recommended for teachers who wish to review facts concerning the path of the sun through the sky is *Daylight, Twilight, Darkness and Time*. By L. C. Harrison. New York: Silver, Burdett, and Company, 1935.

definite work in direction on maps is involved. The Buffalo kindergarten group, in constructing the Peace Bridge after their visit to it, used the longest dimensions of the room without regard for correct orientation. Nevertheless, the need for the use of directions as an aid in expressing relative locations is apt to appear in many connections. The watchful teacher will seize upon the excursion of the proper complexity combined with the opening of interest to make the transfer of directions in space to directions on a map.

The easiest approach to directions on maps is made while working with a map of the neighborhood which the class has constructed. While the paper upon which the map was drawn lies on the floor, teacher and class should discuss the direction of the places represented from each other and write "north" on that part of the map that shows those places farthest north. The same should be done for the other directions. During this discussion the map should be properly oriented, the north part of the map placed toward north in space. If the map shows places seen on an excursion the children can tell about the excursion, tracing the journey as the map shows it. Then they should point toward the real objects in space.

The next step is the hanging of the map on the wall with north toward the top. It should be hung first on the north wall or across the north corner as in that position the transfer of direction from the map to the points of the compass is easiest. It must be moved from wall to wall, however, so that the children will not become dependent on a certain position. In each place the children will enjoy games which involve reading from the map the direction of buildings or points in relation to the school and then pointing into space toward them.

"When we go to the fire house, we go north," says Edward, moving the pointer from the square representing the school on the map up toward the square representing the fire house.

"Let us point in the direction we went when we went to the fire house," suggests the teacher, and they point north in space. It is evident that such a simple procedure will help to prevent that ever-present trouble resulting from the confusion of "north" with "up."

When children begin to use the globe and flat maps of the continents and the world, care is needed to insure the correlation of direction on the maps with direction in space. Exercises similar to those suggested may well be continued. For example, when the first wall map of North America is introduced, it might well be laid on the floor, properly oriented, with the northernmost area represented lying toward the north. After the home city is located, an effort is made to have the children think of the continent as spread out on all sides of them. For example, "The map tells us that if we go east from Buffalo far enough, we will reach the Atlantic Ocean. Let us point in the direction we would travel."

"Up North"

The confusion of "up" with "north" is an ever-present problem. No one device will prevent or correct it. Constant watchfulness and attacks from various angles are necessary. The exercises suggested above will help. With a fourth grade the author has tried illustrating down and up on the project globe. Small figures with upstretched arms were cut from paper. They were supposed to represent the children of the different lands that had been studied during the year. In addition, Admiral Byrd was shown at his antarctic camp. We talked about "up" as meaning away from the earth or above the head of a person standing on the earth. Then we stuck with clay the little figures on the globe to show that up would be different for each of them. The lesson was only partially successful as the children were more interested in why Admiral Byrd did not fall out of his polar camp than in discussions of

up and down. The most remarkable thing about the entire lesson was the lecture on gravity delivered by one of the children in answer to their questions.

Use of Flat Maps

When use is first made of the flat map, whether a wall map or one in a textbook, its relationship to the globe should be made clear. Globes are inconvenient; they fall from desks; they can't be carried on journeys by travelers; they can be examined by only a few people at a time. For convenience, therefore, we try to show the same things on flat pieces of paper. Third grade children can understand these truths easily, and flat maps should not be needed earlier. During this discussion of flat maps, the continents and oceans should be pointed out on the globe and on the map. When maps of continents and smaller areas are used, the regions should always be identified with the area as shown on the globe.

The bright eyes of third grade children may discover that the continents do not look quite the same as on the globe. Those of fourth graders surely will, if provided with the materials and stimulated in their observations. The author has never attempted to explain variations in map projections to children below the fourth grade but she knows from experience that fourth grade children not only can understand but have their interest in maps heightened by the explanation that it is very difficult to show the curved surface of the earth on a flat piece of paper and that many men have tried many ways of doing this; that it is particularly difficult to show the whole world on one map, and as a result, we have many kinds of world maps. A search of the rooms of most school buildings will reveal world maps on a sufficient variety of projections to interest the children and to emphasize the point.

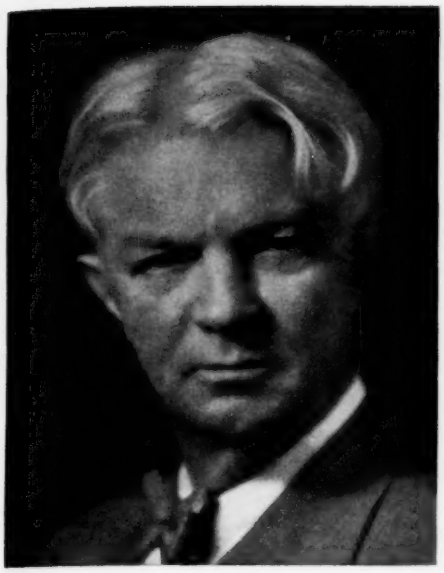
The Use of Scale

The primary teacher has no responsibility toward instruction in estimating distances and areas from the scale of miles on maps. Begun in the later part of the fourth grade the exercise of that skill belongs to the upper grades. There are, however, situations arising in connection with primary work where attention needs to be given to preparatory work. This is especially true when a class begins to use sectional maps showing areas isolated from the remainder of the continent or world. If a map of the Netherlands is placed on the blackboard panel, the practice is to make it as large as convenient, probably about the same size as that of China which occupied the same board space during the previous unit.

The location of the two countries on the globe or world map and observation of the size as shown there will help to get the correct impression of the relative size of the countries. If this is done before the outline map is placed on the blackboard, the children can follow the plan of the teacher to "make a map as large as we can so that we can see it better." The use of small mimeographed maps along with the large scale map will help the children understand that the size of the map does not tell one the size of the area shown.

Summary

The purpose of this series of articles has been two-fold; first, to emphasize the need for careful development of map-reading skills in the primary grades; second, to suggest ways in which some of these skills may be taught. In addition, it is hoped that teachers will discover increased interest in the use of maps and that they will transfer to the children interest and joy in the use of a tool that helps greatly to make one at home in this world.



William H. Kilpatrick

Ruth Streitz

Convention News

"CURRENT Opportunities and Difficulties in Childhood Education" has been chosen as the theme for the Forty-fifth Annual A.C.E. Convention, meeting in the Netherland Plaza Hotel, April 19-23 in Cincinnati. Speakers at the general sessions and leaders and participants in the study groups will emphasize the theme. It is hoped that studio classes can be organized to give practical experience in discovering new opportunities and in solving some of the difficulties in handcrafts, painting, dancing, story-telling, music, and nature study. Exhibits, bibliographies, books and pamphlets, and school visiting will add further practical value to the work of the study and studio classes.

William H. Kilpatrick will address the first general session on "Difficulties That Beset Us," and will participate in other sessions throughout the conference. Ruth Streitz, Professor of Education, University of Cincinnati, will direct the study classes and will conduct the final symposium on "The Next Step in Childhood Education."

Since this convention is essentially a study conference, students and beginning teachers are particularly invited. They will be given opportunities to participate in convention activities, to meet and talk with outstanding leaders in the field of childhood education, to see a professional organization at work, and to meet other students and teachers interested in teaching young children. A number of superintendents are making it possible for their teachers to attend the convention in Cincinnati by arranging for student substitutes. Thus, many students who cannot attend will have important classroom experience in their own communities as a result of the convention.

Preliminary programs will be available in February, upon request to Mary E. Leeper, Executive Secretary, 1201 Sixteenth Street Northwest, Washington, D.C.

Book... REVIEWS

Editor, ALICE TEMPLE

CHILD PSYCHOLOGY. *By Fowler D. Brooks, with the collaboration of Laurance F. Shaffer. Boston: Houghton Mifflin Company, 1937. Pp. xxx + 600. $3.00.*

The nineteen chapters of this book are arranged according to the usual topical sequence. There is an introductory chapter dealing with theories and methods, followed by one on hereditary origins of structure and function. The third chapter (by C. R. Garvey) deals with principles of learning, including the conditioned response. This is followed by a chapter on infancy, physical and motor development (two chapters), language and intelligence (three chapters), emotion, motivation, social and personality development (seven chapters), and one chapter each on child hygiene, the organization of traits and the prediction and guidance of child behavior. Each chapter is followed by a list of selected references which is supplemented by a fairly extensive bibliography, arranged by chapters, in the appendix. There is a useful glossary of technical terms and a well-prepared index, as well as many illustrative graphs and charts.

Like many other recent text books on child psychology, Dr. Brooks has based his treatment of the subject directly upon the experimental literature. He has, however, included a sufficient amount of expository material and illustrative description to make the book useful for the serious elementary student as well as for those of more advanced standing to whom it is primarily addressed. It will not appeal to the dabbler who must have all material predigested and all facts reduced to a formula by which thought is rendered unnecessary. The beginner who does not expect to go beyond the beginning will find other text-books that are better suited to his taste. But students with some degree of scientific sophistication whose interest in the subject is more than cursory will find much valuable material in this volume.—*Florence L. Goodenough,* University of Minnesota.

PERSONALITY DEVELOPMENT IN CHILDREN. *By Ernest J. Chave. Chicago: University of Chicago Press, 1937. Pp. xii + 354. $2.50.*

This book seeks to evaluate the various factors that contribute to the personality development of children, without picturing the course of that development in detail. The importance of a multiple approach is emphasized. In successive chapters the contributions to personality of heredity, organic structure, intelligence, motivation, play and playmates, the home, school and religion are considered. There are also discussions of the effects of handicaps and of maladjustments on personality.

In the final chapter the integration of personality through community cooperation is discussed. Especially interesting is the summary under "twenty points" of the outstanding principles that may serve as an integrating policy. The discussion is essentially on an interpretative rather than a practical level.—*John E. Anderson,* University of Minnesota.

FOUNDATIONS OF CHARACTER AND PERSONALITY. *By George H. Betts. Indianapolis: Bobbs-Merrill Company, 1937. Pp. xii + 371. $2.00.*

In this posthumous volume, the final thought and work of Dr. Betts, a pioneer in the field of character education, is presented. The subtitle, "An Introduction to the Psychology of Social Adjustment," indicates this point of view. Character and personality are conceived in terms of consistent and habitual modes of conduct. Moral values arise from the consequences of conduct to others. Since the source of ideals is

found in the immediate environment, education and training have important functions in building character and personality. The formation of attitudes, ideals, beliefs which result from cumulative experience and which come in time to function as motives, is discussed in some detail. Social codes also are highly significant in the determination of conduct. Throughout, Dr. Betts emphasizes genetic and environmental factors. But in the last analysis, moral standards are personal. Inner initiative, individual responsibility and the capacity for self-criticism and self-compulsion are essential to any well-ordered life. *John E. Anderson,* University of Minnesota.

CREATIVE GROUP EDUCATION. *By S. R. Slavson. New York: Association Press, 1937. Pp. 247. $2.50.*

This book is noteworthy because it deals with education in youth centers, apart from the school, in a way that is significant for the classroom teacher. Moreover, the author discusses the relations between older boys and their leaders with definite implications for the home and school life of children at all ages.

The first chapter sets forth briefly the philosophy of the progressive educator who believes that the future of democracy depends upon the development of "mature human personality." Mr. Slavson states: "The trend now is toward using the small club and school group as a training ground for wider social action: the individual member is viewed as a potential force for group function and social improvement."

This trend is by no means novel and certainly does not represent fully the position of educators who have advanced beyond the current doctrines of "progressive education." Later, it is clear that Mr. Slavson regards the social milieu in a wide sense as the force which ultimately shapes personality, but he does not develop this view adequately, thus neglecting major issues in the life of youth today. However, he does advocate genuine participations in social responsibilities and active concern with social problems which children and youth understand, because they are affected in various ways.

The author's fine analysis of leadership qualifications and techniques is illustrated by vivid records of situations and verbatim reports of discussions. Although the therapeutic value of group activities under guidance is emphasized repeatedly, there is no obtrusive partisan attitude toward any particular school of psychotherapy.

Mr. Slavson sketches briefly the activities of informal groups interested in arts and crafts, music, literature, drama, science, trips, parties, festivals, sports and self-government.

He has succeeded in writing a meaningful book in a spirit as informal and sympathetic as that he advocates for group life. It is always refreshing to hear a story out of direct experience unburdened with pompous theory.—*Beryl Parker,* New York University.

Notes on Publications Received

THE CHILD'S OWN WAY SERIES. *By Marjorie Hardy. Chicago: Wheeler Publishing Company, 1937.*

After nine years of experience with this popular set of readers Miss Hardy has prepared a new, revised edition. Much of the material has been rewritten, and new stories have been added. The spacing of words and sentences has been improved, the vocabulary reduced, and more repetition of words incorporated. The books have been made even more attractive than the earlier ones, through new illustrations, new color plates and new bindings.

The five books of the series are as follows:

The New Little Book. A Pre-Primer—$.20
The New Wag and Puff. A Primer—$.60
Surprise Stories. A First Reader—$.60
New Stories. A Second Reader—$.76
Best Stories. A Third Reader.—$.84

MAN AT WORK: HIS INDUSTRIES. *Pp. vi + 529.* MAN AT WORK: HIS ARTS AND CRAFTS. *Pp. vi + 554. By Harold Rugg and Louise Krueger. Boston: Ginn and Company, 1937.*

Children who have been using the earlier books in the series, *Man and His Changing Society,* will welcome Volumes VI and VII, the last to appear. The second of these is unusually interesting because of the material with which it deals—the development of different types of architecture; of the theatre, including drama, music and the dance; of language and the making of books; of number and measurement and the measuring of time.

BOOKS FOR CHILDREN

Editor, MAY HILL ARBUTHNOT

EACH IN HIS OWN WAY. *By Alice Gall and Fleming Crew. Illustrated by Kurt Wiese. New York: Oxford University Press, 1937. Pp. 180. $2.00.*

It is difficult to write about animal heroes without becoming sentimental or overly dramatic. Mrs. Gall and Mr. Crew have, for the most part, avoided these pitfalls and their ten animal characters are natural, interesting heroes. The stories are remarkably varied from "Pelorous Jack" a Dolphin, to "Jock," the pony of King George. There are two elephant stories, a Seeing Eye dog tale, a dog of the Saint Bernard Hospice, a war Pigeon, Alexander's Bucephalus and General Custer's horse, Comanche.

Kurt Wiese's illustrations have remarkable beauty. Children six to ten will enjoy these stories.

WITH CAP AND BELLS. *Selected by Mary Gould Davis. Illustrated by Richard Bennett. New York: Harcourt, Brace and Company, 1937. $2.00.*

Miss Davis, supervisor of story telling in the New York Public Library, has brought together sixteen stories that have been found genuinely amusing to the children. There are two by Mary E. Wilkins, "The Silver Hen" and "The Christmas Masquerade," that are as delightful as they are unfamiliar.

There seems to be no end to collections of favorite stories but Miss Davis knows how difficult it is to find tales that children consider funny. Hence the justification for her gay, little volume.

A HOUSE FOR A MOUSE. THE TAIL OF A GUINEA PIG. KATIE, THE CATERPILLAR. *Told and illustrated by Cicely Englefield. New York: Oxford University Press, 1937. $.50.*

These small books are exquisite in format and make an enticing trilogy. Katie, the caterpillar, wanted to fly and finally did. Clara, the strong-minded guinea pig, determined to have a tail, but found she was safer without one. Jemima, the mouse, made her James go house hunting until he saw the necessity for building rather than renting. Such are the stories; slight, but well told and charmingly illustrated.

BABETTE. *Story and Pictures by Clare Gurlay Newberry. New York: Harper and Brothers, 1937. Pp. 30. $1.50.*

Babette is surely one of the year's most beautiful picture books. "Mitten" was an enchanting young feline but Babette, the Siamese kitten, will enslave all cat lovers. "Babette's father had a wide, kind face," says the text and in the picture, father's blue eyes have the depth and iridescence that create a startling effect of reality. The story is charming for children from three to seven or eight, but we suspect cat lovers of all ages will find themselves owning and gloating over this exquisite picture book.

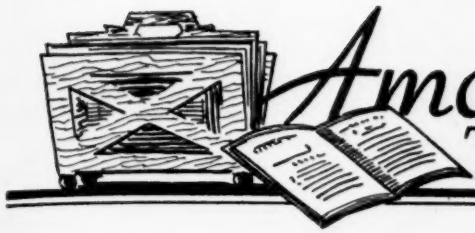
WALTER, THE LAZY MOUSE. *Story and pictures by Marjorie Flack. New York: Doubleday, Doran and Company, 1937. Unpaged. $2.00.*

That Marjorie Flack takes as much pains with her stories as with her pictures has always been apparent. Her little tales have admirable plots, lively actions, economy of incidents and satisfying conclusions. They deserve their success and children show excellent taste when they insist on Marjorie Flack and more Marjorie Flack books.

Walter is a longer tale and a little more subtle but it is written and illustrated with Miss Flack's usual charm. Children from six to nine will enjoy Walter's reformation and difficulties.

THE ZIPPER A B C BOOK. *By Sterling North. Pictures by Keith Ward. New York: Rand McNally and Company, 1937. Unpaged. $1.25.*

Here is a modern A B C book dedicated to the idea that X need not stand for Xerxes nor Z for Zebra. Far better X for the X-ray of Jimmy's bones and Z for a zipper that cleverly closes the book. It is a rhymed alphabet of a modern child's world. The words are amusing and plausible. This should be a very popular book.



Among... THE MAGAZINES

Editor, ELLA VICTORIA DOBBS

LITTLE RED SCHOOL HOUSE—1938 MODEL. By Edwin R. Embree. *Atlantic Monthly,* November, 1937, 160:636-643.

"This is the story of efforts in the South to drive rote teaching from the school system and to put some education in its place." So runs the first sentence in the second article of a series on progressive education. Mr. Embree is president of the Julius Rosenwald Fund which has been building schoolhouses, especially in the rural areas in the South.

After transforming, to a considerable extent, the physical facilities for public education, it occurred to the officers of the Fund to investigate what went on in those well-equipped buildings. To their dismay they found an overwhelming use of "rote recitation and meaningless drill in formalistic studies," drawn from ill-selected books. As as example: The teacher was "hearing a lesson on birds." In response to her question, "When do robins come?" an observing boy answered promptly, "In the Fall." He was told to read his book more carefully. Again he gave the same answer, but after much insistence the teacher forced him to say what the book said, "Robins come in the Spring. . . ." And so they do in Boston where the book was written, but not in Louisiana, as the boy well knew. . . . We had all too frequent evident of a stupid teacher grinding out a *lesson* from a text-book unadapted to the region.

"What happens in rural schools concerns the city dweller because rural regions are producing surplus populations which are steadily moving into the cities." The autobiography of a southern country boy records that after going to school for several years he happened to open the family Bible and found to his amazement that he could read it. It had never occurred to him before that the rote drill of the school had any connection with things outside of school. "The World War draft records indicated that twenty-five per cent of American youth had similarly never made a successful transfer of school reading. The percentage is still higher in mathematics."

"If true education is learning from the doing of one task how to use similar processes in other problems, then handwork and activities with nature are almost necessarily educational. . . . Stimulating activities involving manual dexterity and natural processes can be arranged easily by any resourceful teacher and do not require elaborate or expensive equipment. The less formal the equipment the better since the aim is to stir up the creative impulse and develop resourcefulness."

Space will not permit quoting the excellent discussion of the needs of the rural school, the better training of teachers, and the emphasis upon the "content of living as contrasted with merely making a living" which will justify our almost mystical faith in the American school system.

THE TEACHER'S ROLE IN PERSONAL AND SOCIAL RELATIONSHIPS. By Esther Lloyd-Jones. *Understanding the Child,* October, 1937, 6:7-9.

The editor introduces this article thus: "It displays a new and significant trend in contemporary educational thought . . . parent-child relationships, teacher-child relationships, emotions —these are fast becoming the stuff of educational psychology and pedagogy."

Says Dr. Lloyd-Jones, "The fact that children carry over important personal and social relationships into the classroom has been fairly well ignored until recently. The teacher has usually conceived it her responsibility to minimize these relationships to the greater glory of the intellect and the enhancement of human

knowledge." After enumerating some of the common points on which public criticism often centers, she adds, "while it is a comparatively simple matter to decide how a teacher should act socially in order not to excite adverse comment, it is not so simple for her to discover progressively the needs of each child and relate herself to these needs in such a way that the child's best development takes place. In this instance, having no social custom to guide her, she is forced to depend upon her own knowledge of child psychology and sequences of development, her own sensitivity to the individual differences among her pupils, her own professional training, aided, perhaps, by consultation with experts to help her discover appropriate goals for her own efforts in terms of children's needs, and to work out methods for achieving them."

Children do not demand the same satisfactions from their teachers. Some need more mothering than their home supplies and so try to maneuver the teacher into the role of mother. Others attempt to dramatize the teacher as a person to be resisted. Others, experimenting with the technique of happy conformity, welcome the demands of the teacher and avoid all uncomfortable sense of guilt by prompt conformity. The average unsophisticated teacher does not at all understand the needs of the various children for whom she assumes responsibility.

One of the greatest needs in education is to recognize that teachers are more to the children than ladders of history, arithmetic, and other subjects. This need can be met only as teachers become more sensitive to the child's personal and social needs, and more adept in relating themselves to those needs in a way to give the best possible service.

CONSERVATIVES VERSUS PROGRESSIVES. By E. H. Black. *The School Executive,* December, 1937, 57:160-162, 191.

A summary of the two points of view—conservatives versus the progressives—regarding the place and function of subject matter reveals a difference in the following respects:

1. The conservatives think in terms of adult needs, while the progressives think in terms of child need. The conservatives start the educative process with teaching subject matter, while the progressives start with activities based upon the interests, needs, and capacities of the child.

2. The conservatives would first give the child the tools for obtaining an education, while the progressives would develop the tools as the learning process continued.

3. The conservatives would first give the child a background for learning through a mastery of social heritage, while the progressives would give the background but only as it is needed in solving some immediate problems.

4. The conservatives would use subject matter as a means of disciplining the mind. The progressives deny this theory of mental discipline.

5. The conservatives would set up artificial motives to drive the child to work. The progressives would secure effort through the interest of the child.

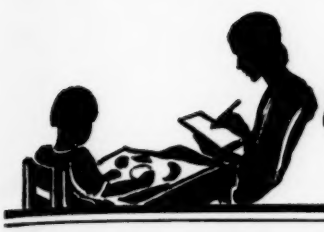
6. The conservatives would set up subject matter in advance, while the progressives would bring in subject matter as it is needed.

7. The conservatives would set up subject matter in a series of separate subjects, while the progressives would use a core curriculum.

Such an analysis of the divergent points of view in conservative and progressive education should prove helpful, although this reviewer thinks Superintendent Black (Bristow, Oklahoma) is a little hard on the conservatives. That, of course, depends upon which group of "conservatives" one has in mind.

SELECTED REFERENCES ON ELEMENTARY SCHOOL INSTRUCTION. By Edith P. Parker and R. M. Tryon. *Elementary School Journal,* October, 1937.

Twenty-eight items in the fields of geography and the social sciences have been chosen and annotated by Miss Parker and Mr. Tryon, from periodicals. As is usual with bibliographies published in the *Elementary School Journal* this one will be found most helpful and suggestive. In connection with this bibliography, readers may be interested in the summary of research completed since 1934 in the teaching of the social studies on the elementary level which is published in the December, 1937, issue of the *Review of Educational Research.*



Research.. ABSTRACTS

Editor, JOHN A. HOCKETT

A STUDY OF THE ENTERING B1 CHILDREN IN THE LOS ANGELES CITY SCHOOLS. By Elizabeth L. Woods and Others. *Journal of Educational Research,* September, 1937, 31:9-19.

For a number of years schools have experimented with junior-primary classes in order to reduce the large amount of failure in the first grade. The results of a careful investigation of the current practices in Los Angeles are given in this report. In 1928, a study of non-promotion in one Los Angeles district showed twenty-one per cent of the children repeating the low first and a like proportion designated as failures in the high first grade. Experimentation was carried on to determine the relationship between mental age and success in beginning reading. Transition B1 classes were inaugurated to enrich the background and experience of immature children before they were subjected to formal reading.

The present report presents and interprets the situation existing during a recent school year. Nearly seven thousand entering children were given the Detroit first grade intelligence test and were assigned to Transition or regular classes on the basis of mental age and teachers' judgment. Nearly two-thirds of those with mental ages below seventy months were assigned to Transition groups. Eighteen per cent of these were retained a second semester. One-third of the children with mental ages between seventy-one and seventy-five months were assigned to Transition classes; only 2.4 per cent were retained for a second term. Slightly less than five per cent of the children with mental ages of seventy-six months and above were assigned to Transition groups.

Teachers are strongly influenced by mental maturity in recommending children's placement. They also consider such other factors as background of experience, physical condition, emotional development, social attitudes and work habits. The investigators find that many teachers do not think objectively of children's ability by utilizing the test data available and other important evidences of maturity. They also find that misunderstanding of the objectives of the Transition groups leads to the placement of children in regular low first classes when both teacher judgment and test results would indicate assignment to Transition classes.

Operation of the Transition classes has reduced the percentage of failure in the low first from twenty-one per cent to eleven per cent. The pupils, of course, spend an extra semester in the school but they do not experience failure in meeting the goals set for them. The fact that a large proportion (thirty-two per cent) of entering first graders must be assigned to Transition classes, including many who are normal and above normal in intelligence, in order to avoid failure in the first school semester indicates to the authors a misallocation of reading in the curriculum. They conclude that less than half of the beginning pupils have sufficient maturity to succeed with the standard first grade program, and report that the necessary revision of the curriculum is now under way.

A COMPARISON OF THE METROPOLITAN READINESS TESTS AND THE PINTNER-CUNNINGHAM PRIMARY MENTAL TEST. By Albert Grant. *The Elementary School Journal,* October 1937, 38: 118-126.

First grade teachers are much interested in the predictive value of the various primary mental tests and readiness tests. In the present study, both the Metropolitan Readiness and the Pintner-Cunningham Mental Tests were administered to 3,561 entering first graders in Cincinnati, all of whose ages were between five years, eleven months and six years, ten months. The coefficient of correlation between total scores on the two tests was found to be .81. The author states this

is higher than the correlation usually found between two primary intelligence tests and is almost as high as the reliability coefficient of either one of the tests.

A useful analysis is made of the scores on each of the six tests comprising the Metropolitan battery. Test 1 contains pairs of symbols, figures, and pictures, requiring the discrimination of similarities and differences. Twelve per cent of the children tested made zero scores, revealing a failure of the test to measure the abilities of one-eighth of the pupils. In Test 2, the pupil copies letters, numbers, and geometrical figures. Seven per cent of the children made zero scores and 11 per cent, maximum scores, again showing failure to discriminate between the abilities of many pupils.

In Tests 3 and 4, the pupil marks pictures in accord with statements which are read to him. Test 3 apparently fails to differentiate between pupils of average ability since nearly 60 per cent of the scores lie between 10 and 13. In Test 4, on the other hand, almost three-fourths of the scores fall at the top or within three points of it. More difficult items seem to be required.

Knowledge of number vocabulary, counting, writing numbers, and other number abilities are measured in Test 5. The distribution of scores in this test is more satisfactory than on any of the others. This test also correlates more highly than the others with the Pintner-Cunningham Test. Test 6 measures common knowledge, requiring the child to select the one picture out of four that meets the examiner's description. Most of the scores are closely grouped at the upper end of the distribution. The test, consequently, makes little discrimination between the abilities of the majority of children.

The tables presenting distributions on the six Metropolitan tests and the Pintner-Cunningham test for a large number of children of average ability should prove useful to those who are concerned with interpreting the significance of given scores on these various tests.

Judging By Results

(Continued from page 205)

suggestions based on the mass of information before the group.

After the completion of this unit the class began a similar attack upon the topic, *Ways of Using Leisure Time.*

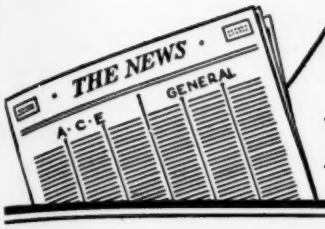
Observation of Results: There were many observable changes in individual and group behavior. A sense of responsibility to each other and to the audience developed to rather a marked degree. The fact that they felt that everybody was interested in the same problem made each child feel that he must contribute his share toward the building of the total picture. The universal interest in the problem made for an active listening attitude. More directness in speech was immediately apparent. In fact, many children seemed aware of an audience for the first time.

All of the shy children contributed in some way. Whenever possible, they were brought indirectly into the discussion, so that they grew rather than plunged into the situation. If at any time, the teacher discovered any hesitancy, seeming to indicate a groping for ideas or sudden embarrassment, she tried, through questioning, to tide the discussion over the hard spots. Often the shy child was encouraged to ask for experiences or attitudes from the class and was made, in this manner, a real part of the group. Making a shy child ask questions of other children forces him to talk more directly to them. One timid child who seemed stiff and uncomfortable was asked to clarify her idea by illustrating it on the board as she spoke. This movement resulted in a greater freedom in speaking.

Aggressive children showed a tendency to monopolize the discussion. In many instances the motive for expression was not to add to the discussion but to add to self-glorification. They need, still, to develop a greater consideration for others, a feeling that the other fellow's ideas are important to know.

At the present time the records show that interest in his subject and understanding and organization of it, together with eagerness for discussion with a sympathetic and courteous group help a child, more than any other factors, to develop *self-confidence, sincerity, freedom, poise,* and *directness in speech.*

MARY E. LEEPER



News . . . HERE AND THERE

New Branches

To the twelve new Branches of the A.C.E. announced this year we can now add:

Arkansas Association for Childhood Education

Lake County Association for Childhood Education, Florida

Kindergarten Club of MacMurray College, Jacksonville, Illinois

Owosso Association for Childhood Education, Michigan

Southwest Missouri Association for Childhood Education

Nebraska Wesleyan Association for Childhood Education, Lincoln

Jamestown Association for Childhood Education, New York

Primary Club of Millersville State Teachers College, Pennsylvania

A New Life Member

Last August Allene Seaton, for many years Kindergarten Supervisor in the public schools of Louisville, Kentucky, and a loyal A.C.E. member, retired from active service. Teachers in the Louisville kindergartens have expressed their friendship and their appreciation of Miss Seaton's service to children by presenting her with a Life Membership in the Association for Childhood Education.

A.C.E. Executive Board Meeting

On November 26th and 27th members of the Executive Board of the Association for Childhood Education met at Headquarters in Washington for their annual business session. Discussion centered around (1) a review of the business affairs of the Association, (2) planning the publication program of the Association, (3) preparing the program for the 1938 convention in Cincinnati, and (4) reviewing progress reports submitted by chairmen of A.C.E. committees. Helen A. Bertermann, General Chairman of the Cincinnati Convention Committee, met with the Board.

Revised Book List

Last year the Committee on Literature of the Association for Childhood Education, Mary L. Morse, Chairman, compiled a *Selected List of Ten Cent Books*. Changes and additions since that time have been incorporated into a revised edition now available at Headquarters office. Price 15¢.

New Leaflet

The Committee on Equipment and Supplies, Frances M. Berry, Chairman, announces a four-page mimeographed leaflet, "Toys—What—When—A Leaflet for Parents." It has been prepared for the use of both teachers and parents The lists are not intended to be complete, but are suggestive as to the type of toys suitable for children at different age levels. Secure from the Association for Childhood Education, 1201 Sixteenth St. N.W., Washington, D.C. Price 10¢

An Annotated Bibliography

Of particular interest to teachers and administrators as a guide to professional problems is the November bulletin of the Department of Elementary School Principals of the National Education Association, prepared as a service to members. It is an annotated bibliography of the first fifteen yearbooks of the Department, in which articles are classified under subject matter.

Child Labor Day

Child Labor Day will be observed on January 29th, 30th or 31st. The number of boys and girls employed in factories and mills has decreased. But many still work on streets, in laundries, stores and hotels, in large-scale agri-

cultural enterprises and in industrial homework. Ofter they are completely unprotected against low wages, long hours and unhealthful working conditions. The struggle for the abolition of child labor in the United States is far from ended. Ratification of the Child Labor Amendment was not completed during 1937, and thousands of underprivileged American children were left without hope for immediate legal protection from the federal government. Observe Child Labor Day this year. Arrange child labor talks, plays and programs in churches, schools and clubs. Take stories to your local newspapers and arrange for radio broadcasts. Material to help you in your plans can be obtained from the National Child Labor Committee, 419 Fourth Ave., New York, N.Y.

A Canadian Conference

The National Federation of Kindergarten, Nursery School and Kindergarten-Primary Teachers, affiliated with the Canadian Welfare Council, held its fourth annual conference in Hamilton, Ontario, October 23d. Miss A. F. Robb, of Hamilton, presided. Approximately two hundred members were present. Educational impressions of other countries were exchanged at the business meeting. Interesting displays of children's work were assembled in one nursery school and two kindergartens. R. H. Roberts, Inspector of Schools, York, Ontario, addressed the gathering at the noon luncheon on "The Individual Child." Dr. Florence Dunlop, Director of Special Classes, Ottawa, the guest speaker of the evening, spoke on "First Things First," stressing early child training for the welfare of a nation.

Melbourne Kindergarten Training College

In giving the "Principal's Report" for 1936-37, Christine M. Heinig expressed warm appreciation of the excellent work of the past principal, Mary Gutteridge, who is now doing graduate study in the United States. Miss Heinig also acknowledged the cordial hospitality and cooperation extended to her by Mrs. T. A. Beckett, President of the Free Kindergarten Union of Victoria, and by members of the board, staff and student body of the college.

Activities reported outside the regular class work by Miss Heinig were the following: Sixteen patterns for children's garments, ages one to seven years, were designed and tested with special reference to health, posture and self-help needs, and were put on the market by a local commercial company. This company has made up a set of clothing from the patterns for exhibit purposes. Cooperation has also been given in developing patterns for children's knitted clothing and for students' uniforms. Children's "posture built" chairs, tables and cots, silver and shoes are being designed. A series of lectures in child psychology given for parents have appeared in a local newspaper and are now being assembled in pamphlet form.

The college is expanding its training program to include programs for primary as well as nursery school and kindergarten work. Special emphasis is being placed upon the integration of the guidance program for these three age levels to assure continuous development.

Miss Heinig is remaining for a second year in Australia. The Association for Childhood Education extends its best wishes to her and to the other workers in Australia.

Children's Book Collection

The Story Cove collection of children's books, exhibited for two years at the World's Fair in Chicago, is now permanently housed in the library of the School of Education at the University of Chicago. In addition to their use by children of the University Elementary School, the books will be accessible to any child of suitable age accompanied by an adult, and will be used by faculty members in studies of the historic and comparative aspects of children's reading.

Parents' Activities

The Resource Committee of Germantown Friends School, Philadelphia, announces classes for parents in wood carving, pewter and copper molding, modeling, music appreciation, country dancing, creative leadership and other activities, including a forum on world and social problems. Six classes will be held in each subject, during the months of January, February and March.

Montessori Training Course

The Association Montessori Internationale announces the Twenty-Third International

Montessori Training Course which will be held in Amsterdam, Holland, from the end of January to the middle of June, 1938. Dr. Montessori will present the objectives and methods of her Four Plans of Education—a concept of education as a social process. Instruction will be given in the application of the Montessori Method to the teaching of children up to the age of twelve. Students from this country are invited to attend. For information address Dr. Maria M. Montessori, General Director, Association Montessori Internationale, 22 Quinten Massijsstraat, Amsterdam-Zuid (Holland).

Mothers' Room Project

The Mothers' Room of the Youngstown, Ohio, Public Library continues to be one of the most popular places in the library. The function of the room is twofold. First, to provide definite method and materials to aid parents in instilling a love of books and reading from babyhood, with resultant character training. Second, to provide material on all phases of child training, care and development.

Motion Picture Film

The Children's Bureau, U. S. Department of Labor, Washington, D.C., has a two reel film on posture that is of interest to physical education teachers, athletic directors and recreation leaders and is also suitable for a general audience. The first reel may be used as a general introduction and the second to show important posture exercises. The film can be supplied in 16mm. and 35mm. sizes. There is no rental charge but the borrower must pay transportation charges both ways on the larger size and at least one way on the smaller.

Vacation Course at Oxford

A Vacation Course for American Women Graduates and Teachers will be held at Oxford University, July 6 to 27, 1938. The subject will be "England in the Past Fifty Years," and lectures will cover the literature, history, politics and thought of the period. Students will have the opportunity to hear lectures by eminent people, authorities in their fields, and to discuss the topics of the lectures with Oxford University teachers. Other features of the course will be excursions, concerts, plays, and informal social intercourse. Applications will be received only from teachers in approved universities, colleges and schools or from graduates of approved colleges or universities not necessarily engaged in teaching, and preference will be given to applications received before March 1, 1938. Applications and requests for further information should be sent to Marion L. Day, 9 St. Lukes Place, New York City.

Primary Education in India

In October many leading educators gathered at Wardha with Mahatma Gandhi to discuss his recent proposals that (1) widespread rapid education of India's children must be built around the learning of a craft, preferably spinning, and (2) that children's school hour craft work should cover an important part of education's expenditure. "Education through a craft, not in addition to a craft" is one phrasing of the first of these two objectives. Concerning the second, Gandhi said, "In a poverty-stricken land like India, Ministers of Education cannot afford to wait until they have discovered fresh sources of income with which to finance education. . . . The industry of spinning fulfills needs so permanent and universal that no difficulty would be had in utilizing the product." Gandhi does not expect children's work at spinning or any other practical, needed village craft chosen as a nucleus of group study, to pay at first, but thinks it would, after about seven years of practice, become truly remunerative, so that the child could feel he was covering his own educational cost.

Yearbook Corrections

Attention is called to two errors in the listing of Branches in the 1937 *Yearbook* of the Association for Childhood Education. On page 14, change the listing of the Utah Kindergarten-Primary Association to the Utah Association for Childhood Education. On page 20, change the listing of the Albany Kindergarten Association to the Albany Association for Childhood Education. Our apologies to both organizations for this error.

Publications Representatives

In an effort to help A.C.E. Publications Representatives send subscription orders and re-

newals to the Washington office without delay, we will send to each representative requesting them, business reply envelopes on which no postage is required. Subscription orders may then be conveniently mailed to Washington Headquarters on the same day they are received. Service to the subscribers will be much more prompt if we can have your cooperation in this matter.

Help the Editors

Your attention is called to the Editors' Note on page 209 of this issue. It is hoped that many readers of CHILDHOOD EDUCATION will help in the preparation for the December, 1938, issue by sending to the editors *now* an account of successful Thanksgiving and Christmas festivals held in your school this year.

Pamphlets Available

The University Extension Division of the University of Wisconsin, Madison, has issued a revised edition of "Choral Speaking." This 44-page mimeographed pamphlet contains lists of materials and a bibliography. Within the state of Wisconsin, 25¢; elsewhere, 40¢.

The following are available to teachers on request:

"A Visit to the World's Greatest Printing Plant," Government Printing Office, Washington, D.C.

"Armour's Food Source Map," Armour and Company, Chicago, Ill.

"The Story of Coffee" and "Coffee Through the Camera's Lens," American Can Company, 230 Park Avenue, New York, N.Y.

"Railway Literature for Young People" (bibliography), Association of American Railroads, Transportation Building, Washington, D.C.

"Between Babyhood and School Life," "The Nursery Class," and "The Educational Value of the Nursery School," Nursery School Association of Great Britain, 8 Endsleigh Gardens, London, WC.1. Prices 4d., 3d., and 4d., respectively.

ANNOUNCING OFFICIAL A. C. E. PIN

ACE Actual Size

Members of the Executive Board of the Association for Childhood Education, after consultation with A.C.E. Branch representatives, have selected an official membership emblem. This pin is in gold and blue enamel, with safety catch. Life, Branch and Contributing members of the A.C.E. are entitled to purchase and wear this pin.

ORDER BLANK

ASSOCIATION FOR CHILDHOOD EDUCATION
1201 16th St., N.W., Washington, D.C. Date .....

Enclosed find remittance for Official A.C.E. Membership Pin.

	Price	*Number*	*Amount*
Rolled Gold	$1.00 ea.	.....	.....
10K Gold	4.00 ea.	.....	.....

Name ..... Prof. Position .....

Street ..... City ..... State .....

Approved by ..... A.C.E. Branch President

Orders from Life and Contributing Members need not be approved by Branch Presidents